CHILD DEVELOPMENT

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Published by
Publication Unit
National Council of Educational Research and Training,
114, Sunder Nagar, New Delhi-11

S.C.E.R.T., West Bengal
Date 12..3..65
Acc. No. 1882

© National Council of Educational Research and Training 1964

136.7
NCE

First Published: October 1964—2,000 Copies

Price : Rs. 15.00 *or* 35 *Sh.* *or* 5 $ 40 c.

Printed at National Printing Works, 10, Daryaganj, Delhi-6

FOREWORD

I am glad that the National Council of Educational Research and Training is bringing out the present symposium on Child Development.

Progress in education depends for its impetus and direction upon research. A country, old in years and civilization, India is avowedly young in educational research. To be aware of the gap is a significant first step towards supplying the deficiency.

Nowhere is the deficiency more marked than in the field of research in child development. The present symposium is designed to point the directions in which research is most urgently needed and to indicate the corresponding fields in which practical education and training must necessarily follow. To the extent that research workers and others are stimulated to face these problems, the symposium will have served a valuable purpose.

The present century is called the century of discovery of the child. A great deal of research has been done on subjects relating to child development in different countries of the world. As most contributors to the symposium point out, there is an urgent need for original research into specifically Indian problems. This is a point so important in its implications for Indian education and training that it needs to be reiterated with emphasis, if only to avoid the pitfalls of generalizing the results of investigations carried out in other countries and in different circumstances, and of treating research as a formal technique to be cultivated for its own sake.

Contributors to the section on Child Welfare through Child Education in the symposium have stressed the need to apply the findings of Indian research to the practical problems with which we are faced. Their contention that research should be judged by its capacity to be applied here in this country will, I am sure, command a wide measure of agreement.

The famous exhortation of Socrates is as relevant for today as it was for the times gone by:

> Could I climb to the highest place in Athens, I would lift up my voice and shout, 'Fellow-citizens, why do ye turn and scrape every stone to gather wealth, and take so little care of your children to whom one day you must relinquish it all ?'

NEW DELHI
August 31, 1963

K.L. SHRIMALI
MINISTER FOR EDUCATION
GOVERNMENT OF INDIA

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1

GENERAL PRINCIPLES OF DEVELOPMENT: PHYSICAL AND MOTOR

Pamela Elaine Devaraj

Motor abilities and special motor skills have played a singularly important role in man's effort to secure control over his natural and social environment. It is true that in modern life highly developed motor abilities probably play a less crucial role in an adult's fending off predatory animals, securing food and finding shelter against the elements in social and physical welfare than they once did. Yet, like all other areas of development, an understanding of the physical growth and motor development of children is necessary to promote healthy growth and the happy adjustment of children.

PHYSICAL GROWTH

Almost the first question which one asks about a new-born child is: 'How many pounds does he weigh?' and 'How tall is he going to be?'

At birth a baby is generally 19 to 21 inches long. Boys tend to be slightly longer than girls and the first-born tends to be a little shorter than later babies in the family (67). Growth in length in infancy and early childhood is characterized by a rapid but decelerating rate for the pre-school years. By three months, a baby gains 20 per cent of his birth length; by one year, 50 per cent; by two years, 75 per cent. At about four years, he is double his birth length (62). With this early rapid growth it is not surprising that sixty per cent of adult height is achieved by girls at three-and-a-half years, and by boys at four-and-a-half years (76).

Table 1 on page 2 derived from different sources presents the average lengths of boys and girls from birth to five years. It shows successive increase in height with increase in age, as well as the differences in height for boys and girls of the same age.

The Department of Nutrition, Haffkine Institute (35) investigated the length of new-born infants in Bombay. They found that the lengths for boys ranged from 15 to 21 inches with an average of 18.17 inches. For girls, the length ranged

TABLE 1. AVERAGE LENGTHS OF BOYS AND GIRLS FROM BIRTH TO FIVE YEARS

Source	Boys						Girls					
	Year						*Year*					
	Birth	1	2	3	4	5	Birth	1	2	3	4	5
	(Length in inches)						*(Length in inches)*					
Harvard University (30)	19.9	29.7	34.7	37.9	40.9	43.4	19.7	29.3	34.2	37.7	40.6	43.4
University of Iowa (23)		29.6	34.0	37.5	40.4	43.4		29.1	33.6	37.2	39.9	42.8
University of California (1)		30.7	34.8	38.3					29.7	33.9	37.4	
Fels Institute (29)	19.7	29.7	34.3	37.7	40.6	43.4	19.5	29.2	33.9	37.3	40.2	42.9
Brush Foundation (22)		29.9	34.6	38.4	41.4	44.0		29.2	34.4	38.0	41.1	44.1
Merrill Palmer (37)			35.6	38.0	40.4	42.8			34.2	37.4	40.0	42.6
University of Minnesota (3)	20.2	30.4	34.8	38.2	41.1	43.6	19.5	29.4	34.3	37.9	40.9	43.6

From Rand, Sweeny and Vincent, *Growth and Development of the Young Child*, p. 125 (75).

from 16 to 20 inches with an average of 18.16 inches. Khalap (52) found the average length of a new-born child in Poona to be 18 inches. A comparative study made by Khillis in Singapore of South Indian infants showed an average of 18.18 inches for both boys and girls. Though at birth the sexes were alike with a mean birth weight of 6.3 lb. and a mean birth length of 18.8 inches, by the end of the year the males were significantly heavier and longer.

The weight of the new-born in the United States generally is between 5½ and 9½ lbs. (64). Nearly all babies lose five to eight per cent of their weight during the first days of life (77). Birth weight is regained usually in ten to fourteen days.

During early life, growth in weight is characterized by rapid but decelerating rate for the first two years, slow deceleration in rate from two to three years, followed by a gradual acceleration in rate for the remainder of the pre-school period (76). Thus, an infant's weight is double by five months, triple in the first year and quadruple by the end of two-and-a-half years (83). The gain in weight from two to five is less than the amount gained in the first year of life.

Table 2 presents the average weight for boys and girls from birth to five years.

TABLE 2. AVERAGE WEIGHT OF CHILDREN FROM BIRTH TO FIVE YEARS

Source	Boys						Girls					
	Year						*Year*					
	Birth	1	2	3	4	5	Birth	1	2	3	4	5
		(*Weight in pounds*)						(*Weight in pounds*)				
Harvard University (36)	7.6	22.6	28.1	32.4	36.6	40.9	7.5	21.8	27.3	32.1	36.8	41.3
University of Iowa (23)	8.3	22.0	27.2	32.2	36.9	41.8	7.7	20.5	26.7	31.9	34.9	39.8
University of California (1)	8.2	24.1	29.8	34.8			7.4	21.6	26.9	31.9		
Fels Institute (29)	7.7	22.0	27.8	32.2	36.6	41.5	7.5	20.9	26.3	30.7	35.1	39.7
Brush Foundation (28)		23.8	29.1	33.5	38.4	42.8		21.8	27.5	32.4	37.1	42.2
Merrill Palmer (37)			29.6	33.1	36.4	40.8			26.9	32.0	35.3	40.6
University of Minnesota (2)	7.3	22.9	28.3	33.1	37.5	41.5	6.8	20.2	26.9	31.6	36.2	40.3

Ibid., 1954 p. 129.

In India, satisfactory standards for height and weight are not available owing to paucity of research in this field, though some stray researches have been done. Illa Devi (43) made a study of the height and weight of boys and girls from five to 17 years of age. At each age-level 25 girls and 25 boys were sampled at random. Her findings for the ages five and six are presented in Table 3.

TABLE 3. HEIGHT AND WEIGHT OF BOYS

Age in years	*Mean weight* (*lb*)	*Mean height* (*cm*)	*S.E. for Wt.*	*S.E. for Ht.*
5	39.54	109.18	1.97	1.33
6	42.66	112.94	1.72	1.04

From Illa Devi, Distribution of Height and Weight among Different Age-groups of School Children, *Education and Psychology*, 1958.

In medical examinations of school children Athavale (4) found that the maximum weight of these children corresponded to about 75th percentile of the American male child, and that the minimum weight in the age-groups three to nine years corresponded to the third percentile weight of the American child two to three years younger.

Someswara Rao, *et al.*, (81) made a health survey of 2,015 children in the Nilgiris. The children were from homogeneous social stock and came from poor and lower middle class families (clerks, school teachers, agriculturists, petty merchants and tea plantation workers). The ages of the children ranged from two to 19 years. The findings regarding the height and weight of children between two and six years are given in the following tables:

TABLE 4. HEIGHT AND WEIGHT OF NILGIRI CHILDREN (GIRLS)

Age	*No.*	*Average height (inches)*	*S.D.*	*Average weight (lb)*	*S.D.*
2	8	29.2	2.42	16.1	2.41
3	32	32.8	3.42	21.5	4.43
4	34	34.9	3.17	24.8	5.11
5	49	37.1	2.98	27.8	3.68
6	66	40.1	2.93	31.9	5.20

TABLE 5. HEIGHT AND WEIGHT OF NILGIRI CHILDREN (BOYS)

Age	*No.*	*Average height (inches)*	*S.D.*	*Average weight (lb)*	*S.D.*
2	18	29.5	1.77	17.3	2.30
3	33	32.5	2.98	22.6	3.85
4	44	35.4	2.82	26.1	4.18
5	50	37.8	3.07	29.3	5.02
6	70	40.5	2.60	33.4	4.22

From Someswara Rao, K, Taskar, A.D., and Ramanathan, N.K., Nutrition and Haemoglobin Surveys in Children in Nilgiris District, *Indian J. Med. Res.*, 1954, (**42**:55-75)

Kherr *et al.*, (53) point out that the samples used in these studies are too small to admit of scientific generalisation. However, they attribute the lower standing in physical measurements of Nilgiri children to poor socio-economic status. Studies following the scheme of nutritional advisory committee of Indian Research Field Association, Aykroyd and Rajgopal (5), Wilson (94), Mitra (66), Krishnan (54), Bhave (8), Kurulkar (57), Fabisch and Hamburger (22), Theophilus (87), and Rao *et al.*, (76), showed that economic status and diet can have a profound effect on the growth of children.

Uma (90) conducted a study of heights and weights of school children from two economic levels in Madras. She chose 2,436 children from the higher socio-economic status and 1,286 from the lower socio-economic status. The average heights and weights of boys and girls in the higher economic level were consistently greater at each age when compared with the average heights and weights of boys and girls in the lower economic level.

Besides these studies on height and weight, a study was made by Jai (44) in Bombay of 215 infants (119 boys and 96 girls) on facial dimensions of a newborn within 12 hours of delivery. She found that the average facial dimensions for face-height, bizygometric breadth and purico-facial depth were 53-54 mm. 78-79 mm. 49-50 mm. respectively. Haematological investigations carried out by Sheila Paul (71) in Delhi, indicate that the several blood values run almost parallel to those obtained by European workers. She observes that babies from different parts of the world are essentially the same with only minor variations in regard to basic physiology and metabolism if cared for under similar conditions.

MOTOR DEVELOPMENT

In recent years two rival theories have been formulated in an attempt to describe the development of behaviour in the child. The first of these rival themes, represented by Watson (93) describes the development of behaviour as a process of integration and organization of reflexes, while the second interprets this development as a process of individuation of response. The integration theory is an atomistic approach, while the individuation theory is sometimes called the organismic approach.

Some General Trends in Motor Development

Some general trends of the development of motor abilities are observable in all children. These trends are independent of any specific cultural or child-training influences. Thompson (88) lists the trends in motor development as follows: (1) Mass to specific trends. (2) Trend from large to small muscles. (3) Cephalo-caudal and proximo-distal trends. (4) Bilateral to unilateral trend. (5) Maximum towards minimum muscular involvement trend. (6) General orderliness of motor development.

1. Mass to Specific Trends

Perhaps Nagge explains this trend of development best (69). He points out, 'In the first weeks after birth . . . . . the motor activity of the child is chiefly mass reaction. If his rattle is vigorously shaken over his head, or breath blown into his face or he is startled by sudden motion close to his cradle, the excitement seems to travel throughout his entire nervous system; his legs kick and his arms wave and he wrinkles his face and turns his head. As he grows older these mass movements tend to grow progressively smaller in magnitude. The muscular reactions of the child become more and more adaptive, and when you shake his rattle now he merely extends his arm to secure it.' Coghill (17), Delman (19) and Kuo (56) all show that on the basis of this growth trend we can expect a general bodily involvement when the child is introduced to a relatively new motor task. We can also predict that with increased maturation and experience, a specific, less general pattern of movements will emerge.

2. Trend from Large to Small Muscles

According to this developmental trend, the large muscles are the first muscular groups over which the growing child gains coordinated control. As examples of research that can be cited to support this developmental trend, reference may be made to Nagge (69), Thompson (88), Goodenough (34).

3. Cephalo-Caudal and Proximo-Distal Trends

Motor control appears first in the head region and spreads progressively down the trunk of the body until the feet are reached. In their study of prone behaviour and walking, Gesell and Ames (28) conclude:

> 'The general direction of this ontogenetic organization is unmistakably cephalo-caudal. The infant can lift his head in his first week of life; not until the end of the first year does he stand on his feet.'

The proximo-distal trend in motor development signifies that the parts of the body closest to the torso are brought under control before the more distal portions.

Gesell and Ames (28) combine these two growth trends when they observe that 'the foot is both a caudal and a distal terminus: the final fulcrum for locomotion.'

4. Bilateral to Unilateral Trend

As maturation proceeds, bilaterality in terms of speed, strength, co-ordination, and personal preference gradually gives way to a unilateral functioning in motor skills. Lederer (59) in his study of hand preferences supports the above view. Karr (49) also obtained a positive correlation of 0.77 ± 0.08 between consistent use of the preferred hand and chronological age, supporting the theory 'that as a child grows older, he uses one hand more consistently.'

5. Maximum towards Minimum Muscular Involvement Trends

This trend in motor development overlaps the two trends previously discussed: the mass to specific trend, and the trend from large to small muscles. The present trend merely implies that the more immature the child, or the more difficult the task, the greater is the muscular involvement on the part of the child, the greater is the expenditure of energy, and the greater is the amount of cross-purpose muscular involvement. Hildreth (40) in his description of the development of number and letter construction among younger children, and Ames (1) in her study of leg and foot postures in the human infant during the fifth year of life, exemplify this trend. Burnside (13) has further observed that 'the first stages of locomotion are characterized by an over-production of movement.' The considerable 'fidgeting' and 'restlessness' of small children who are directing their efforts towards mastering new skills can be explained on the basis of this trend.

6. General Orderliness of Motor Development

There appears to be an orderly sequence in the motor development of children. In her study of the postural and locomotive development of 25 infants during the first two years of life, Shirley (79) identified five sequential phases: (1) passive postural control; (2) active postural control of the entire trunk and undiverted activity; (3) active efforts at locomotion; (4) locomotion by creeping; and (5) postural control and co-ordination for walking. Shirley concluded on the basis of her extensive observations that each separate stage was a pre-requisite for the immediately succeeding stage, and that every baby proceeded from stage to stage in the same order. She did, however, admit that the sequence was not absolutely rigid but permitted slight shifts in the various stages. Bayley (6) in a later study, concluded that this apparent sequence in postural and locomotion development observed by Shirley does not depend on a regular order of appearance of specific abilities, but rather on rapid increments in the whole level of ability. A number of other investigators agree with Bayley that the orderly sequence in motor growth is present but that the idea of pre-requisite phases advanced by Shirley is in doubt.

Thompson (88) adds 'certainly, individual infants do appear to skip some of the sequential phases.' (p. 246).

McGraw (61) on the basis of her detailed study of the development of twins under various environmental conditions, has placed the general orderliness of motor development in a less specific matrix. She has suggested the following phases for the development of any motor skill:

1. initial stage immediately prior to the emergence of the growing action pattern;
2. first somatic movements which are inchoate and ephemeral, often masked by diffuse, general activities;
3. partial, incomplete, movements, which become more definite and expansive;
4. the inhibition of this exaggerated movement pattern by the emer-

gence of other movements until the former becomes restricted to its most specific and economical form;

5. after one movement pattern has reached a certain degree of definiteness, it may unite or integrate with other patterns of motor development.

McGraw's scheme may be profitably employed to explain many of the rhythms, spurts, pauses and regressions in the development of motor abilities among young children.

Sequence of Development

Experimental studies of the development of muscle coordination have been numerous and have given the ages at which the average child is able to control different parts of his body. Hurlock (42) presents the material according to the 'law of developmental direction' rather than according to chronological age. She divides the material into the following topics: (1) motor development in the head region, (2) motor development of the arms and hands, (3) motor development of the trunk, and (4) motor development of the legs.

1. Motor Development in the Head Region

New-born children are usually unable to hold the head erect. This skill is very slow to develop in the human infant as compared with other animals.

Bryan (11) has reported one infant who on the eighth day of life crawled six inches with his head in the air. This observation is rare at this early age. Eye co-ordination, which is very poor during the first few hours after birth, improves so rapidly that, by the end of the fourth month, even the most difficult type of eye movements are present in every normal baby. By the end of the second month, the baby can focus his eyes on a stationary object and by the third month can follow a moving object.

The blinking reflex, present at birth, can be called forth by touching the face near the eyes, the eyelashes, and the corner of the eye, or by allowing a current of air to strike the eyes. Later, this same response becomes voluntary and can be called forth in anticipation of the touch of an object as it approaches the eye. Voluntary blinking is present in most babies by the end of the fourth month (48).

Reflex smiles, in response to some organic or kinesthetic stimulus, appear as early as the first week of life. 'Social' smiling, or smiling in response to a smile from another person, which is considered by many as the beginning of social behaviour does not occur until the third month (48).

Gesell and Thompson (32) report that the infant from four to six weeks of age can momentarily hold his head erect. At twelve weeks all the children studied by them could hold this erect position for a longer period. By the sixteenth week the neck rather than the shoulders becomes the main support of the head. A few weeks later, most children, these authors found, can quickly move the head in relation to sudden, unexpected changes in body position.

2. Motor Development of the Arms and Hands

The hand of the neonate is typically clenched into a fist. Attempts to open the hand are met with resistance from the first day. If an object of suitable size, like a finger, is put into the hand of the infant, his fingers close tightly around it. This clasping reflex disappears in later months. With the fourth month, the child shows an interest in reaching for objects around him and by one year his prehension resembles the adult patterns. Watson, Jones, Gesell, Gesell and Thompson (93, 48, 25, 31) have made important studies of prehension in the young child.

For purposes of analysis, Nagge (69, p. 95) says that this complicated act may be divided into: (a) the period of visual fixation of the object to be seized, (b) the approaching movements of the arm and hand, and (c) the grasping technique.

It is found that infants less than five months of age seldom attempt to approach objects that are in their field of vision. This age is characterized by only passing attention to such objects. With increasing age, greater and greater periods of time are spent in visual examination and apprehension of objects until finally the object is seized almost upon sight. The approach movements of the baby's hands also show characteristic changes with increasing age. Casther (15) reports that skill shown in making actual contact with the pellets used in his experiments increased from 30 per cent in his 20-week old babies to 100 per cent at the 32-week age level. Accuracy continues to improve up to the age of one year. From the fourth to the seventh month, the child typically sweeps his hand through a semicircle in approaching an object. The hand is started high and sweeps down upon the object. Frequently both hands are used. There is little hand preference at this early age. The approach to the object becomes less circuitous and more direct after the seventh month. The earliest crude approach movements are primarily those of shoulder and elbow. Halverson (38) lists ten types of grasping in their temporal order of appearance in the development of this skill in infants: (1) no contact with the object; (2) contact made; (3) the primitive squeeze; (4) the squeeze grasp; (5) the hand grasp; (6) the pain grasp; (7) the superior palm grasp; (8) the inferior forefinger grasp; (9) the forefinger grasp; and (10) the superior forefinger grasp. The opposition of the thumb to the fingers appears only in the later complex types of grasping. In younger infants the thumb hangs relaxed or is curled under the fingers of the hand and is not used to good advantage. Thumb opposition does not appear to a great extent until the seventh month after birth. The completed act of grasping involves muscles of the trunk, arm, neck, eyes and legs, and constitutes an intricate mechanism.

Gesell and Thompson (32) treated one of a pair of identical twins in cube reaching for six weeks while the other received no such training. At the termination of this period, the trained twin could not be differentiated from the untrained one upon the basis of prehensive behaviour. The authors conclude that the development of the skill is primarily dependent upon the maturation of nervous mechanisms.

3. MOTOR DEVELOPMENT IN TRUNK

The ability to turn the body, from side to side or from back to stomach, is not present at birth. By the second month the baby should be able to turn from side to back; by the fourth month from back to side; and by the age of six months, to make a complete turn from stomach to stomach. This complete turn is not necessarily made at one time at first, but rather several partial turns, with rest periods between each, finally result in a complete turn of the body. In turning, the body moves first in the head region and last in the legs. The baby turns his head, then his shoulders, then his pelvis, and finally with a pushing, kicking movement of his legs, he manages to turn his entire body.

SITTING: The ability to sit alone, without any support, depends upon the development of the heavy muscles of the back. At 20 weeks the baby can sit alone when supported with his body erect; if unsupported, he will lean forward passively though his head is kept erect. Between the ninth and tenth months, the average baby should be able to sit alone.

Gesell and Thompson (30) report the following to be important stimuli to sitting in the young child: (1) intrinsic, maturational factors; (2) perceptual factors; (3) physiological factors like fatigue and illness; and (4) personality factors. Feeble-minded children sit at a somewhat later age than do children of normal intelligence. Terman (86) reports that his selected group of unusually bright children sat at a still earlier age than did a group of normal children who were not quite so bright. Girls usually sit alone slightly earlier than boys. Those who have had a good home and pediatric care, sit sooner than those whose care has been inferior (72).

Dennis (20) reared two infants in semi-isolation for a period of 13 months in order to evaluate the effects of social stimulation upon the development of their motor powers. These babies had only their physical needs attended to, with no fondling or tutoring by any adult. These babies pulled themselves to a sitting position, emitted vocal greetings, played with their toes, laughed, played and showed timidity like normal babies and at normal ages for the appearance of these activities. These modes of reaction appeared in the absence of tuition. Thompson (88) points out that there are two general processes of psychological growth: (1) inter-and intra-cellular changes which are more or less independent of environmental influences and provide an adequate nutritional protective basis (maturation); (2) interactions of organism and environment which lead to changes in behaviour and psychological growth (learning) (p. 281). Research literature leaves little doubt that the physical and motor development is highly dependent on maturation.

4. MOTOR DEVELOPMENT IN THE LEGS

The earliest form of locomotion to be found in all babies is rolling. In this, the baby moves his body by means of a very crude sort of leg and arm movement. This is usually followed by hitching or locomotion in a sitting position. The baby uses one leg to push himself along and the other is doubled under him or extended, thus helping to maintain his balance. In hitching, the movement of the body is aided by the arms and hands, which accompany pushing or slightly kicking movements of the legs. The movement in hitching is always backward rather than forward, which is characteristic of crawling, the next stage in the pattern of locomotion. Hurlock (42) reports that hitching is generally present by the sixth month. Crawling follows hitching in the normal sequence of development. It appears as early as the fourth month and reaches its peak between the seventh and ninth months. Crawling is progression characterized by abdomen contact with the surface while the body is pulled along by the hands and arms alone, and creeping is defined as turning on all fours without belly contact. By the age of nine months the normal baby can creep.

Shirley (79) gives the most complete description of the developmental steps leading up to and including creeping. She states that the 24 babies she tested went through almost the same series of reactions in approximately the same order. She gives the series as follows (all reactions are for infants in the prone position): chin up, median, three weeks; chest up, median, nine weeks; knee push or swim, median, 25 weeks; rolling, 29 weeks; scoot backward, 39½ weeks; creep, 45 weeks. The final stage before creeping was scooting backward, which appeared in the median at 39½ weeks, and was done by propping on the hands and moving them back toward the knees, thus shoving the body backwards. When walking began, creeping was given up as a means of locomotion, though it was still used in play.

STANDING : Standing is the next step in the developmental sequence leading up to walking. Normally, standing with support overlaps creeping and crawling and is a necessary preliminary to walking. Standing with support is an easier task for a baby than pulling himself to a standing position. Girls as a rule, stand slightly earlier than boys (Peetman and Higgons, 72). Gesell and Ames (28) report that maintaining an upright posture is possible only after a long series of preparatory co-ordinations. To maintain his balance the baby stands at first with his feet apart, the toes turned out, the knees locked, and the head as well as the upper part of the trunk carried forward. This is true whether the baby stands alone or is supported. When he falls, he usually falls backwards. Gradually the baby puts less pressure upon the object supporting him, and finally stands completely without support.

WALKING : Once the baby gains confidence in his ability to stand with support, he certainly takes a step. He then gradually walks with support. Experimental studies of large groups of babies have shown that the average age at which the baby can walk with support is one year. By 14 months, two-thirds of the babies of that age walk without support, and by the age of 18 months, the average baby walks like an adult (6, 29, 26, 10). Buhler (12) gives the ages at which some of the reactions appeared in the infants she observed. She says that rising to a standing position without help was present in 60 per cent of the infants at one year, and that standing alone appears in the eleventh month.

There are, however, marked individual differences in the ages at which babies first walk. Some walk as early as seven or eight months, and others begin as late as 18 months. The age at which the baby will first walk is usually compatible with the rate of his total development (10). Walking is a complex skill. Walking has been known to occur without the standing or creeping stages of development appearing in the series. Bryan (11) reports one child standing alone during the first ten days of life, but only for a moment and reports no repetition of the occurrence. But her observation is difficult to duplicate in the literature on the subject.

It is generally held by laymen that walking is learnt. However, the major experimental literature (69, 79, 13, 51 and 32) tends to stress the factor of maturation of the nervous and muscular systems of the child as more important than that of learning, though they admit that some amount of learning is also involved. Thus walking is a product of both learning and maturational processes.

The general developmental sequence of motor behaviour is very well given in 'the California Infant Scale of Motor Development' reproduced on the next page.

THE CALIFORNIA INFANT SCALE OF MOTOR DEVELOPMENT*

Test items	*Age placement*
	(Months)
Head erect-vertical	1.9
Head erect and steady	2.9
Turned from side to back	3.4
Sits with support	3.5
Holds head steady	3.6
Beginning thumb opposition	4.1
Sits with slight support	4.6
Turns from back to side	5.0
Partial thumb opposition	5.1
Sits alone momentarily	5.7
Pulls to sitting position	6.2
Rolls from back to stomach	7.0
Partial finger prehension	7.8
Sits alone with good co-ordination	8.5
Fine prehension with pellet	9.3
Raises self to sitting position	9.4
Pulls to standing position	10.5
Stands up	10.6
Walks with help	11.6
Sits down	12.5
Stands alone	12.5
Walks alone	13.0
Walks upstairs with help	20.3
Walks downstairs with help	20.5
Walks upstairs alone; marks time	24.3
Walks downstairs alone; marks time	24.5
Jumps off floor; both feet	28.0

OTHER TOPICS OF SPECIAL INTEREST IN MOTOR DEVELOPMENT

Handedness

The significance and causation of handedness have been debated right through the ages by philosophers, educators, scientists, clergymen and people in general. Several theories, some laying stress on biological inheritance, others

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*From Table I. p. 3 of N. Bayley. The Development of Motor Abilities during the First Three Years, Time Graph No. 1, 1935. (Quoted by *Martin and Stendler, Child Development*, p. 42) emphasizing social conditioning, have been put forward to explain the causation of handedness. But modern investigations have shown that handedness is caused by a number of factors.

ESTABLISHMENT OF HANDEDNESS

In a study of motor development in young children Hicks (39) observed that about 96 per cent of them threw with their right hands. Jenkins (45) reports between 85 and 90 per cent of the children between the ages of five and seven years studied by her, preferred to use their right hands. Hurlock (42) says: 'During the first two years of life, the child is neither dominantly right nor left-handed. He shifts from one hand to the other, though he usually shows a tendency to steer with the one hand more than with the other. From the age of three to five years is the "critical period" in establishing handedness, because at that time, the child shows more and more preference for the use of one hand rather than the other.' (p. 163).

Giesecke (33) found evidence in an intensive study of seven infants that lateral dominance is a general function and can be established as early as the sixth to the fourteenth week of life. However, he too concluded that fluctuations in dominance are very common during the first month of life. Halverson (38) found no hand preference in reaching, grasping and holding until the fortieth week, after which the right hand was definitely preferred. Lippman (59) reports that children of four-and-a-half months of age will grasp offered objects equally often with either hand. By the age of 12 months about three-fourths of all children show a hand preference. More than 70 per cent of the children show a preference for the right hand at the age of one year. This preference for one hand strengthens for some years as has been shown in a study by Jones (47).

Skills

Of the skills that have received greatest attention among child psychologists the following are the most important:

SELF-FEEDING: Merry and Merry (65) say that during the second year the child prefers finger feeding to spoon feeding. By the end of the second year he uses his fork as well. During the third year the child can spread butter on bread and use his knife to pull his meat apart.

SELF-DRESSING: The child learns to remove his clothes earlier than he does to put them on. The period of most rapid improvement in dressing is between one-and-a-half and three-and-a-half years (51). Girls learn to dress themselves earlier and more efficiently than boys. By the time the child is five years old, he should be able to dress himself completely with the exception of tying the bow knot on his shoes. He learns this by the time he is six years old.

WRITING: Studies of writing show that up to one year, the baby bangs and scribbles with the pencil. A three-year old child attempts to make simple symbol units, though they are scarcely recognizable as letters (41). The body is not biologically ready for handwriting before the child is six years old. In his early attempt at writing, the child's hand moves from the lower right-hand corner of the paper to the centre, then to the top centre, and finally to the top left. Ames (2) points out that final position comes between seven and eight years.

OTHER ACTIVITIES

In a monumental investigation, Gutteridge (36) observed the motor development of 1,973 children between two and seven years of age. Direct observations were made of the following types of motor activities: climbing, jumping, sliding, tricycling, hopping, galloping, skipping, and throwing, bouncing and catching balls. The following were among the several norms established.

CLIMBING: Climbing activity is well established for half of the children at three years with gradual increments in skill. By the age of six years 92 per cent children are proficient in climbing.

JUMPING: Jumping skill is well developed in 42 per cent of the children at three years, 72 per cent of the boys and girls at four-and-a-half years, and 81 per cent of the population at five years of age.

TRICYCLING: Seventeen per cent of the two-year olds and 63 per cent of the three-year olds can do tricycling skilfully. At four years of age almost 100 per cent are skilfully stunting and using the tricycle for all kinds of imaginative variations.

BALL-THROWING: At two and three years of age there is relatively no skill. At four years about 20 per cent can throw well. Between five and five-and-a-half years, 74 per cent can throw well. "The earliest method of throwing a ball includes mass movements of all the body. Gradually the movements become more specialized and the use of the two hands gives place to the use of one hand in a 'clean throw' " (52). Gutteridge (36) found that boys are superior to girls in climbing, jumping, sliding, skipping and ball-throwing, but that girls are superior to boys in tricycling, galloping, hopping and bouncing and catching balls.

CONCLUDING REMARKS

This study has attempted to make a review of the research carried on in the west and in the east in the physical and motor areas of development. It is believed that an understanding of the growth and developmental trends can do much to help adults guide the motor growth of children in a more intelligent fashion. It is imperative therefore that research of this sort be carried out on Indian children also on as large a scale as in the west. In an Indian setting, topics of interest for research workers may be: (1) the influence of socio-economic status on growth, (2) the influence of nutrition and diet on growth, (3) the relationship of prolonged breast-feeding to growth, (4) the relationship of physical and motor development to other areas of development, and (5) the influence of play schools and nursery schools in development.

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2

DEVELOPMENT DURING PRENATAL AND NEONATAL STAGES

Lila Prem Dass

1. PRENATAL DEVELOPMENT

A baby is already a well-developed and highly complex, human organism by the time it enters the world at the moment of birth. Knowledge of the growth which has occurred during the prenatal stage is vital to our understanding of the child's later development and behaviour. It helps one to realize that from the earliest to the latest stages of development, both mental and physical growth follow an orderly sequence. This sequence is determined by the interaction of the inherited qualities of the cell-tissue and the environment in which the cells find themselves.

Study of the development taking place before birth is extremely difficult and, in some cases, impossible in human subjects. Therefore, our knowledge of prenatal development is limited.

Three methods have been employed in general, for studying human prenatal development and behaviour: (1) observations of foetuses surgically removed for the protection of the mother's health; (2) observations of responses of prematurely born infants; and (3) study of foetal activity by special equipment attached to the mother's abdomen. The various methods employed for studying prenatal behaviour in the uterus are: stethoscopic observation of foetal heartbeat; and mechanically recording foetal movements which are communicated to the abdominal wall, as in the research studies done by Sontag and his associates (35). Each of these methods has advantages and disadvantages from the scientific point of view.

The life of an individual begins at the time of conception. Conception takes place when a sperm from the male pierces the cell-wall of an egg or ovum from the female. The occasions when such mating is possible are physiologically limited and do not depend upon human impulse. Fertilization usually occurs while the ovum is on its way from the ovary to the uterus.

The prenatal period extends over nine calendar months or ten lunar months or approximately 280 days. This is roughly divided into three periods:

1. The period of the ovum.
2. The period of the embryo.
3. The period of the foetus.

The Period of the Ovum

Known also as the germinal stage, this period extends from the moment of fertilization to the end of the second week.

The ovum or mature female germ cell is the largest cell in the human body, and measures approximately 0.14 mm. in diameter. Like all body cells, it is surrounded by a thin membrane and contains in its centre a nucleus suspended in a fluid substance called the cytoplasm. The nucleus of the ovum contains 23 minute, thread-like structures called chromosomes. Similarly, the nucleus of the sperm or mature male germ cell also carries 23 chromosomes. Each male germ cell has either a large 'X' or a small 'Y' sex chromosome. The sex of the child is determined by the particular sperm that fertilizes the ovum. If an 'X' sperm unites with the ovum giving an 'XX' combination, the child will be female. If however, a small 'X' sperm fertilizes the ovum, yielding an 'XY' combination, the child will be male.

When fertilization occurs, the nuclei of the mature male and female germ cells (ovum and spermatozoon) unite to form the zygote (fertilized ovum), which now contains 46 chromosomes. The chromosomes carry innumerable genes which determine the traits inherited from the parents. Thus right from conception, the foundation of future development is laid in certain directions, subject to modification by environmental influences. In a few hours the rapid cell division of the zygote, starts resulting in a globular cluster of cells called 'morula'. Multiplication of body cells however does not result in reduction of the number of chromosomes. Each chromosome is split and duplicated. Thus each resultant cell has the same chromosomal complement as the zygote. It is only in the germ cells that the chromosomal content is halved by reduction division.

During the first week of this period, the fertilized ovum is unattached and can move freely. It receives little or no nourishment from the mother. In the second week, it moves down the fallopian tube to the uterus, which has already undergone structural changes in preparation for receiving it. A small cavity forms within the mass of cells. This results in an outer and an inner cluster of cells. The outer layer develops into accessory tissues that protect and

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nourish the embryo. Part of the inner cluster of cells develops into the embryo itself.

When the ovum reaches the uterus, it implants itself in the walls of the uterus by means of tendrils or villi which have grown around the outer cluster of cells. Extension of these tendrils reach into the blood spaces which have formed within the maternal tissue. The placenta develops at the spot where the fertilized ovum comes to rest. This is the temporary organ from which the umbilical cord extends to the ovum. Through it, nourishment passes into the embryo from the mother's blood stream and waste products are eliminated.

The Period of the Embryo

This period extends from the second week to the end of the second month, and is marked by rapid developmental changes. After implantation, the inner mass of cells begins to differentiate into three distinct layers, called the germ layers. These layers develop unequally and portions of them fold in and out. Different bodily structures develop from these folds.

1. *The Ectoderm* is the outer layer from which develop the epidermis of skin, hair, nails, parts of the teeth, skin glands, sensory cells and the entire nervous system.

2. *The Mesoderm* is the middle layer from which develop the dermis or inner skin layer, the muscles, skeleton and the organs of circulation and excretion.

3. *The Endoderm* is the inner layer, from which develop the lining of the entire digestive tract, the eustachian tube, trachea, bronchia, lungs, liver, pancreas, salivary glands, thyroid and thymus.

At the end of this period, the organism appears more like a human being.

The placenta continues to grow and by six months it covers about half of the uterus. Its functions are: protecting the embryo; supplying water, oxygen and nutrition from the mother's blood to the embryo by means of the umbilical cord; and disposing of waste products from the embryo through the mother's blood stream. At no time is there any direct connection between the blood stream of the mother and that of the developing embryo, although both open into the placenta. The cell walls within the placenta completely separate the two systems. Therefore, apart from the exchange system existing between the maternal and embryonic blood streams, there are no means of communication between mother and child.

Other structures necessary for the protection of the embryo are also developed early. A kind of water-jacket, called the amniotic sac, surrounds the embryo and is filled with amniotic fluid. It protects the embryo from severe blows and jolts during pregnancy.

Development of the Embryo

Most of our present day knowledge of prenatal development has been derived from the extensive study of embryos and foetuses which had to be surgically removed from the mother's womb for medical reasons. The earliest extensive studies of this kind were made by Minkowsky (20, 21). He was later followed by Hooker and others (16). These studies show, that 'the directional trend of embryonic development is from the head down, and from the trunk outward. Mass activity appears first and local activity second and the development of behaviour is closely paralleled by the growth and development of the nervous system' (9).

By 18 days, the embryo begins to take some shape. It establishes a longitudinal axis and its front and back, left and right sides, and head and tail become recognizable. The heart begins to beat by the third week, when the embryo is only about four millimeters in length. The fundamentals of the nervous system are laid at this time. First, the neural tube develops from the outer layer. Cerebral and optical vesicles appear, the medullary groove begins to form, muscles start to develop and limb-buds become visible. At the end of the first month, the length of the embryo is about half a centimeter. By the fifth week, the principal structures of the brain, the cerebellum, medulla, midbrain, and hindbrain can be distinguished at the top of the neural tube.

By the end of the second lunar month, the embryo is approximately three to five centimeters long and weighs about two grams. This is an increase of about 2,000,000 per cent since fertilization. The form is more human now. The development of the head is the most pronounced of the entire body, while the arms and legs are small. The eyes are now in front of the face with eyelids in the form of folds of skin above the eyes. The ears are low on the sides of the embryo's head. The mouth can open, and the lower jaw is very small. There is a small nose and a large bulging forehead. The internal organs—intestines, liver, pancreas, lungs and kidneys begin to appear. The liver begins to produce red blood cells and starts secreting bile. The sex organs are differentiated, and in a large number of cases, it is possible to determine the sex of the embryo. The sympathetic ganglia and nerves begin to form. Muscular activity can be elicited by electrical stimulation, but there is no well-defined neuromotor activity at this stage.

The Period of the Foetus

This period extends from the end of the second month until birth. During this time the various body systems established in a rudimentary form in the embryonic period, grow and develop and begin to function. Motor functions gradually become more differentiated and complex. Spontaneous movements of arms and legs, of a slow uncoordinated type, can be observed.

At the end of the third lunar month, the foetus is about 75 millimeters long and weighs about 20 grams. The head is still very large, its length being one-third of the total body length. Respiratory movements appear, and traces of urea have been detected in the amniotic fluid indicating that the kidneys have started to function.

By the end of 16 weeks, the foetal movement can be felt by the mother. At this time, the foetus measures approximately 115 millimeters in length. All the reflexes observed in the new-born infant are present at this stage, except functional respiration and vocal response. However, they are rather sluggish in appearance. Minkowsky (20) found that separation of the brain from the rest of the body made very little difference in the behaviour of the foetus, because most of these early reflexes are under the control of the spinal-cord rather than the brain.

From 16 to 20 weeks, the foetus grows to about 250 millimeters in length and about 250 grams in weight. Hair appears on the head and body, and nails begin to develop. The mouth becomes capable of opening and closing and blinking of eyes occurs, although the eye-lids are still closed. The grasp and the Babinsky reflex can be elicited and respiratory movements can be evoked by stimulation. Generalized bodily activity increases. The glands of internal secretion, such as the thyroid, pituitary and pancreas are sufficiently developed at this time to start functioning.

At 24 weeks, respiratory movements become more apparent and sucking movements can be evoked by tactile stimulation of the area around the mouth.

The age of 28 weeks is considered important in the life of the foetus since it is believed to demarcate the zone between 'viability' (the ability to live if born), and 'non-viability'. At this age, the child's nervous, circulatory and other systems are sufficiently well-developed to function. If a child is born prematurely at or after 28 weeks of foetal age, there is a good chance of his survival. Of course, special care is required.

Experimental studies with premature infants carried out by Windle (48) Parker (28) and Peterson and Rainey (30) indicate that the foetus is capable of making a differentiation between sweet and sour, and salt and bitter tastes. It can also differentiate certain noxious olfactory stimuli such as ammonia.

However, the sense of smell and taste are not as fully developed as in the full-term infant.

Further maturation of structures and functions takes place between this period and birth. Behaviour becomes more complex during this stage of development. By the time of birth all the main parts of the nervous system are structurally developed; the sense organs can function; the muscles are well-developed; and spontaneous movements of arms and legs can be observed. The foetus is now ready to adapt itself to a new world.

BEHAVIOUR OF UNBORN FOETUSES

Many investigations have been conducted in different countries to study foetal activity at various stages of pregnancy, and in response to external stimulation.

Individual differences in foetal activity have been noted and reported by mothers. Some foetuses are active for 75 per cent of the time, while others are for only five per cent. The type of foetal activity also differs. Newberry (27) found three types—squirming, kicking and rhythmic series of quick convulsive movements called hiccups. Harris and Harris (13) found the foetus to be more active in the evening than in the morning. They found that when the mother was severely fatigued, foetal movements became more frequent and violent. According to Sontag and Wallace (36) sudden emotions of fear or anger on the mother's part also produce immediate and violent foetal movements.

There seems to be some relationship between foetal activity and post-natal development. Richard and Newberry (32) found that infants who had been most active as foetuses showed certain motor performances earlier than most of the other children in the group. Those who had been least active as foetuses had, in some cases, been slow in acquiring motor skills in the post-natal period.

The establishment of specific learned responses during the pre-natal period is considered doubtful as the pre-natal environment is absolutely constant and therefore limits stimuli. (Change is essential for the learning process). Moreover, at this stage, the nervous system may not have attained the necessary functional maturity.

Some of the factors influencing pre-natal environment are:

1. MATERNAL MALNUTRITION: Excessive malnutrition of the mother handicaps the child at birth. Gopalan (10) (in Madras) found that the average birth weights of infants born of mothers from the lower socio-economic groups were significantly lower than those of infants born to middle and upper class mothers. The incidence of still-births and pre-maturity, too, was higher in the former group.

Burke (3) found that the mother's diet, particularly the adequacy of the protein content, is related to the condition of her baby at birth. In an experimental investigation conducted at the university of Toronto, Canada, two groups of pregnant women were studied—the 'good diet' group and the 'poor diet' group. The 'good-diet' mothers were found to be in better health throughout their pregnancies. Complications such as anaemia, toxemia, threatened and actual miscarriages, premature births and still-births were much more frequent in the 'poor diet' group. The duration of labour was also shorter for the 'good diet' group. The babies of 'good diet' women had better health records during the first two weeks of post-natal life, and had a smaller incidence of major illnesses during the first six months compared to the babies of the 'poor diet' group.

2. DRUGS: Sontag and Wallace (37) report that certain toxic poisons and drugs such as nicotine, sometimes seep through the blood vessel walls into the umbilical cord and are transmitted to the foetus, affecting its development. Pregnant mothers given Thalidomide in the first three months of pregnancy gave birth to babies with deformed limbs.

3. IRRADIATION: Deep X-ray treatment during the early months of pregnancy can also adversely affect foetal development.

Murphy (24) studied 75 full-term infants whose mothers had to undergo X-ray treatment during pregnancy. She found one-third of these had mental or physical abnormalities. Twenty of them had severe disturbances of the central nervous system (16 of them being microcephalic). Eight others were extremely small, physically deformed or blind.

4. MATERNAL DISEASES: Virus infection in the early stages of pregnancy may interfere with normal development of the foetus. Diseases that affect the mother's general condition influence the development of the foetus to some extent. The most serious ones are:

(a) GERMAN MEASLES (RUBELLA), contracted by the prospective mother in the first two or three months of pregnancy, may do a great deal of damage to the foetus by producing deaf-mutism, cardiac lesions, cataracts or different forms of mental deficiency.

(b) SYPHILIS, called the 'great slayer of the unborn', frequently causes miscarriages, still-births, congenital mental deficiency, blindness or deafness. Toxins of syphilis in the blood of either parent may injure parts of the germ cells before fertilization, or the foetus may get infected, before or during the process of birth.

(c) GONORRHOEA may infect the baby's eyes when it passes through the birth canal, causing blindness.

(d) ENDOCRINE DISORDERS, a deficiency or excess of endocrine secretion, may seriously affect the physical and mental development of the child. In thyroid deficiency, the symptoms of abnormal development are more pronounced, if it occurs in the early stages of pregnancy. 'Cretinism' is due to extreme thyroid deficiency.

(e) DIEBETES AND TUBERCULOSIS in the mother, have effects on the foetus similar to those of malnutrition.

5. RH BLOOD GROUP INCOMPATIBILITY : If there is incompatibility in Rh blood groups of foetus and mother, the baby may develop severe jaundice and anaemia soon after birth. If untreated, this may lead to severe brain damage (Kernicterus) or even death. Successive pregnancies may result in miscarriage or still births.

Fortunately, such disastrous consequences occur very rarely. Medical techniques are now available, which, if applied early, minimize the consequences of this incompatibility.

6. AGE OF MOTHER : There is some evidence that mortality rates are somewhat higher if the mothers are below 23 or above 29 than if they are between these two ages.

Mongolism, a condition of severe mental retardation, is found more frequently among children born to older women.

7. THE EMOTIONAL STATE OF THE MOTHER may influence foetal reactions and development, but very little scientific knowledge is available on this problem.

Emotions such as anger, fear and anxiety bring the autonomic nervous system into action, liberating chemical substances like adrenalin into the blood stream. These may be transmitted, through the placenta, producing changes in the circulatory system of the foetus.

Studies done by Sontag (40) show that these changes seem to be irritating to the foetus. He noted that bodily activity of foetuses increased several hundred times when mothers were under severe emotional stress. Prolonged maternal emotional stress may have lasting effects on the child. Emotionally disturbed women have been found to give birth to babies who weigh less than average.

8. MATERNAL ATTITUDES : The expectant mother's attitude towards her pregnancy may affect the development of the foetus since it influences her emotional state.

According to Hall and Mohr (12) a mother's resentment of her pregnancy may be related to the premature birth of the child. Wallin and Riley (46) found a relationship between maternal reactions to pregnancy and the infant's later development. More research is needed in this area.

9. MATERNAL IMPRESSIONS: The doctrine of maternal impressions according to which some specific experiences of the expectant mother are responsible for structural changes or determining aptitudes in the growing organism, has no scientific basis. There is no neural or other direct connection between the foetus and the mother for bringing about such changes.

10. MONTH OF BIRTH: There has been some speculation on whether or not the month of birth has any influence on the developing foetus. The results of the few studies done in this connection are inconclusive, because the differences found among children born in the summer and those born in the winter, are slight. These differences have been attributed to chance, physical factors such as temperature and sunshine, and to the health and vitality of the mother.

More definite data on the effects of pre-natal influences on the organism from the moment of conception to birth will help us to understand the effects of the uterine environment on the later growth and development of the child.

Needed Research

1. A complete inventory should be made of pre-natal behaviour studied in the context of Indian conditions. A careful study needs to be made of the directional trends of development at this stage.
2. The emotional adjustment and attitudes towards pregnancy of the mother should be evaluated, with reference to the development and behaviour of the neonate.
3. More information is needed regarding the relationship of the maternal diet and health to the condition of the infant at birth, in India.

2. THE NEONATE

The birth of a child is an exciting event for the family. For the child, it has a great psychological, as well as physical significance. He is now no longer a foetus but a neonate—an individual in his own right, still dependent on his mother, but no longer a parasite on her.

The term 'neonate' is derived from the Greek word *neos* meaning 'new' and the Latin verb *nascor* meaning 'to be born.'

According to medical standards, the neonatal period extends from birth to the end of the second week, or until the navel is healed. Psychologists describe it as the period from birth to the time when the new born makes a stable adjustment to his new environment. Authorities differ as to the exact length of this period.

Many psychologists believe that the human infant undergoes a physical ordeal during the process of birth. For hours, he is subjected to dragging and pushing and to strong compression, particularly of the head. Moreover, sometimes the doctor in attendance has to apply external force (forceps) to facilitate the process of birth. Therefore, the birth process involves potential hazards to the child, particularly injury to the brain. Even minor head-injuries suffered at birth may adversely affect later behaviour and development, and may become evident in the lack of motor coordination, paralysis or defects in mental development. The pressures produced in the birth process may cause fractures of bones, but the more common consequences are haemorrhages. These may be slight or may involve vital nerve centres and result in death. They may permanently affect parts of the nervous system, and consequently its functioning. During the birth process and immediately before and after birth, the child is also subjected to the danger of asphyxiation or deprivation of oxygen. This deprivation of a sufficient supply of oxygen may damage his brain cells and cause mental deficiency.

The birth experience is important to the new-born, because it is the process by means of which a developing child is transferred from the uterine environment to that of the external world; from a constant environment to one involving many changes; from an environment where conditions of learning are unfavourable to one where the conditions present many learning possibilities. Goodenough (15) suggests that the first two weeks after birth be considered separately from the general course of development, because according to her, 'not only must the child adjust to change of environment greater than it will ever again meet, but it also has to recover from the most difficult and dangerous event of life.' The neonatal period is thus a period of adjustment when the infant is forced to put his bodily tools to use, and perfect his newly acquired vegetative functions. Because of the 'ordeal of birth' and the necessary adjustments the new-born must make to survive in his new environment, this period is like a plateau in the developmental process. The baby loses weight during the first few days after birth. However, during the second week, he starts to regain the weight which he lost earlier.

Before considering the characteristics of the new-born, it is important to remember that in different infants, the state of development at birth is not exactly the same. The greatest differences are found in abnormal cases and premature births. Many babies show capacities at birth, which others take several weeks to develop.

Scientific Procedures in Studying the New-born

A sentimental interest in the new-born has existed all over the world since time immemorial. Yet few objective studies have been made of the new-born infant's behaviour. In recent years, some scientific studies have been made of the new-born. These studies have been rather limited in scope and have investigated only the physical and sensory development at birth. The mental and emotional aspects have received scant attention.

Various approaches have been used to study the new-born :

Biographical Studies based on observations of single infants were a kind of systematic attempt to describe the behaviour of the neonate. The emphasis in these studies was on the sensory and reflex actions present at birth. Pratt (35) has pointed out three serious limitations of this approach : 'A paucity of causes, a probable non-representative selection and bias because of family ties.' 'Naturalness' of observation is a definite advantage of this method.

Group Studies, using in some cases the longitudinal, but more often the cross-sectional approach, have also been made. The first group studies of the new-born were made by Kussmaul (26), Genzmer (13) and Kroner (25) in Germany. These studies were also limited to the child's sensory equipment at birth. Later psychologists made 24-hour observations of groups of new-born infants in experimental nurseries. Peterson and Rainey (33) studied 1000 new-born infants to determine the sensory equipment present at birth. Watson (47); Sherman (40) and Blanton (31) studied the 'instinctive equipment' and emotional development of the neonate.

Other psychologists made continuous observations for 24-hour periods, under carefully controlled conditions. Pratt, Nelson and Sun (34) observed 25 infants, using an experimental cabinet. This was lighted from inside, made sound proof and had regulated temperature and humidity. It was equipped with a stabilimeter platform on which all gross bodily movements were recorded.

Many more psychologists devised and made use of various tools for the 'quantitative registration and measurement' of responses. Canestrini (7) used a pneumograph and a polygraph to register the effect of various stimuli upon respiration. Benedict and Talbot (2) used a Crib-recorder to register the 'spontaneous' movements of new-born infants for 24-hour periods. Peiper (32) used a modified form of the Morse apparatus to measure reaction time. He also devised stimulus-controls for the study of thermal and pain-sensitivity. Eckstein and Paffrath (10) used special apparatus to measure the general activity of the neonate. Sherman (39) used motion-picture photography to study the neonate's emotional patterns of behaviour. Gessell (14) made use of the photographic dome to obtain motion pictures from different angles. The 'ultra-rapid' motion picture photography developed by Hunt and Landis (18) is the latest research tool used to study the responses of the new-born.

The Birth Equipment of the New-born

At birth, the neonate appears structurally complete and yet completely helpless. His skin is red and wrinkled and his extremities appear 'spider-like', and are thin and small. The head appears too large for the body and he may or may not have any hair.

The average weight at birth of babies in India, according to Rao and Bhattacharjee (38) is six pounds eight ounces (above 3 kilograms) and they measure about 20 inches (50 centimeters) from top to toe. There seem to be consistent mean differences in weight among different races and nationalities and in different geographical regions. Research carried out both in India and abroad indicates that male babies weigh slightly more than female babies and are somewhat longer. Socio-economic status and the maternal diet during pregnancy also influence the birth weight of children according to Paul and Ahluwalia (31). However, in India, social factors and family customs influence the maternal diet and consequently the child's weight.The first baby is usually found to be somewhat smaller and lighter than later ones.

The babies generally lose weight in the first three or four days. This loss may amount to as much as 10 per cent of birth weight and is greater among heavy babies than among lighter ones. He regains this by the end of the second week. Thereafter there is fairly rapid gain in weight, approximately one ounce or 25 to 30 grams per day for the first three months. The rate may vary a little between the sexes.

Neonates show individual differences in size,weight and the way that they 'feel', although they seem to look so much alike. Their body proportions are different from those of adults. For example, the new-born's head is about one-fourth of his entire body length, while an adult's is about one-eighth to one-tenth of his total length. The infant's face appears to be broad and short because of his flat nose, undeveloped jaws and lack of teeth. The arms, legs and trunk are small in relation to his head. The shoulders are narrow and the trunk-region, larger and bulging. This is just the opposite of adult proportions. The new-born's eyes are approximately one-half their adult size, while the body is only one-twentieth of its adult dimensions. Though almost mature in size, the baby's eye movements are not controlled. At this stage, tear glands are generally inactive and therefore crying is usually not accompanied by a flow of tears. The neck is very short and the skin covering it lies in deep folds. The muscles of the neonate are small, soft and uncontrolled. The bones are composed mostly of cartilage and have more water and less mineral-content, and are therefore soft and pliable. This pliability helps to prevent fractures during the birth process, but it makes the infant susceptible to deformity under sustained pressure.

The skull of the new-born consists of several bones that do not form a rigid structure as in the adult cranium. It has six fontanels or 'soft spots'. These 'soft spots' are membranes that connect the bony areas of the skull. By the age of two years, all these spots are filled in with ossified tissue. This type of skull-structure makes birth easier for both mother and child. Skeletal development of other parts of the neonate's body also differs from that of the adult. The neonate has 270 cartilaginous units, while the adult skeleton consists of about 206 bones. In later development, some of the cartilaginous units join together, calcify, grow in length and width, and assume different shapes.

The physiological functions of the new-born are very different from those of an adult. Soon after birth, the three important functions, respiration, obtaining nutrition (sucking response) and elimination of waste products, are established, though the child has no voluntary control over them. His pulse-rate ranges from 130 to 150 beats a minute, but drops to 118 a few days after birth whereas the adult's pulse rate ranges from 70 to 80 beats per minute. The new-born's respiration is about twice as fast as that of the adult. It ranges from 40 to 45 a minute, while that of an adult is about 20 a minute. Compared to the arteries, the size of the neonate's heart is small, and therefore, it has to beat more rapidly to maintain normal blood-pressure. The temperature of a normal, healthy infant is higher and more variable than that of an adult and is maintained between 98.2°F and 99°F. His blood pressure is low as compared to that of the adult. It gradually increases during the developmental period. Stomach contractions have been observed in the new-born even before food has ever entered his stomach. His stomach contractions are more vigorous than those of adults, and continue till fluid is introduced into the stomach. Extensive observations of the new-born have shown that, 'the stomach empties in four to five hours; infants on a self-demand schedule of nursing take milk more frequently than infants on a four-hour feeding routine; the median number of defecations per 24 hour period appears to be between four and five, and the number of urine voidings, within this time period is between 18 and 19.' (Thompson 44).

Behaviour Responses of the New-born

The infant is born with a number of physiological drives or needs. The satisfaction of his needs is essential for his survival. These drives and needs determine his behavioural responses. Most of these needs are taken care of in a self-regulatory manner. But the drives of hunger and thirst have to be satisfied by others. The way in which the neonate's needs are satisfied will determine the direction of his learning at this stage. Some of the basic physiological needs of the infant are need for oxygen, temperature-regulation, sleep, elimination, hunger and thirst.

THE BIRTH CRY. The first thing that the baby does upon entering this world is to cry. This cry may be spontaneous or induced and represents the beginning of independent respiration. This cry helps to inflate the child's lungs, and fill them with air. Physiologists and psychologists believe that the birth cry is merely a reflex of air entering the new-born's lungs, causing vocal cords to vibrate.

SLEEP. Sleep is part of the infant's behaviour which is present from the time of birth. The new-born is seldom awake. He sleeps for continuous periods of about three hours, and only awakens for short periods when stimulated by hunger, pain, intense noise or light. Gradually the length of unbroken periods increases, but the total number of sleeping hours decreases. Buhler (6) investigated the percentage of sleeping time of infants. She reports that neonates sleep for 80 per cent of the 24 hours, compared with 49 per cent at the age of one year. This means that, at this stage, 20 of the 24 hours of the day are spent in sleep. The infant sleeps more lightly and can be awakened more easily than older children. He is able to fall asleep more readily, too. His sleep reaches its greatest depth during the first hour.

MOTOR DEVELOPMENT OF THE NEW-BORN. The infant at birth appears to be a helpless bundle of skin and bones. But actually he is capable of making many kinds of complex movements and responses. During waking periods, these movements are so rapid and varied that it is difficult to record them accurately. Scientists have, therefore, made use of the motion picture camera and other technical devices to record behaviour. Mention has been made earlier of some of these tools.

The first activities of the new-born have been described as 'random, imperfect and uncoordinated.' These may be due to lack of cerebral control at this stage. Wide individual differences are found in the way children respond. Many of the neonate's responses have 'survival value.' Some of these responses are pupillary and sucking reflexes; head-mouth orientation movements; swallowing, crying, coughing, vomiting, rejecting foods, opening and closing eyes and assuming resting and sleeping positions, etc. These responses help the infant to make physical adjustments to his new environment.

In addition to these three there are other responses which are more localized, for example, shuddering in response to bitter taste; head-balancing in response to changes of bodily position; arm-flexion when the arm is pricked or slapped; the grasp-reflex stimulated by touching the finger or arm; knee-jerk and flexion and extension of the leg; the Babinsky reflex when the sole of the foot is stroked; in the male, penis-erection. All these are in response to some form of local stimulation.

Other responses of the new-born involve coordinations of many parts of the body and are therefore, more generalized. Such responses include—squirming, twisting, arching the back, drawing-in the stomach, body-jerks, shivering, trembling, creeping, stepping movements, and the movements connected with the startle response.

Sensory Development of the New-born. No individual can learn unless he receives information from his environment. He receives this information through his senses of vision, hearing, taste, smell and touch. Many attempts have been made to study sensory functioning at birth, but owing to several difficulties in such research, our knowledge of the sensory capabilities of neonates is still limited.

Vision. The neuro-muscular apparatus involved in vision is not quite perfect when the child is born. The optic nerve is not fully developed and the ciliary muscles are not mature enough to permit adjustment which brings the light rays into proper focus on the retina. Therefore, it is probable that the neonate does not perceive clear-cut images.

The new-born child reacts to light. Responses depend upon the duration and intensity of the stimuli. If the stimulus is of sufficient duration, the pupillary reflex may be observed. This response is somewhat sluggish at birth but becomes perfected during the first few days of post-natal life. There is some evidence of visual pursuit movements in response to moving visual stimuli. Coordination and convergence of the two eyes, essential for fixation and depth perception seem to be absent at birth, but appear in rudimentary form a few hours afterwards. The modal age of fixation is however near the end of first post-natal week. Beasley (1) found that vertical and circular pursuit movements appeared later than the horizontal ones.

Hearing. The auditory mechanism of a new-born is sufficiently well-developed to function. But owing to mucus in the middle ear, the neonate may have poor hearing during the first few days of post-natal life. In general, neonates respond strongly to variations in intensity and duration of sounds, but not to differences in pitch. Loud sounds provoke more changes in circulatory and respiratory rates. On the other hand, stimuli of longer duration may inhibit activity.

Olfaction or Smell. There is some evidence that the neonate makes differential responses to markedly pleasant and unpleasant odours, in the form of facial grimaces or turning away of the head. It is uncertain however, if these reactions are due to the sense of smell or pain. However, these differences are slight and highly variable. On the whole, the new-born child shows little or no discrimination of weak odours. But the presence of odours does tend to provoke more activity.

TASTE. It cannot be said with certainty that the neonate can differentiate between the four taste qualities. In terms of the sucking response, salt solutions stop the response, whereas sugar solutions elicit and maintain it. Acid or quinine solutions are met with facial responses or grimaces. Taste sensitivity develops rapidly within the first two weeks of postnatal life. Moreover, the baby who is moderately full or less hungry, is found to discriminate better than a very hungry infant.

THERMAL SENSITIVITY. This has been noted in the new-born child. This sensitivity appears to vary according to certain physiological states. Studies show that infants respond to temperature changes of five or six degrees in stimulus applied to their legs. Cold stimuli increase the infant's activity level, and when applied to the legs, they elicit extension and flexion reflexes. When cold stimulation is applied to the forehead, it provokes head movements, acceleration in breathing and irregular beating of the pulse. Most infants squirm and suck irregularly if their milk is warmer than 50°C or colder than 23°C. However, large individual differences are found in the thermal sensitivity of new-borns.

STATIC-KINAESTHETIC SENSITIVITY. Neonates are highly sensitive to changes in the spatial position of the body. The responses they make reveal that they react to stimulation from the sense organs located in their muscles and semicircular canals of the ear.

PAIN. Sensitivity to pain is present to some degree at birth and becomes sharper in the first few days of life. Constitutional differences affect pain-sensitivity. Pain may play an important role in the child's learning, particularly in acquiring fears and anxiety.

LEARNING. Observations of the neonate in the feeding situation, reveal changes in behaviour suggestive of learning in the first month. Marquis (27) reported the establishment of conditioned sucking responses to auditory stimuli by the fourth or fifth day after birth. On the other hand, studies by Russian physiologists indicate that conditioned responses cannot be established during the first few months after birth, as the cerebral cortex functions are incomplete during this period. Hurlock (19), believes that, 'what learning there is through the conditioning technique is apt to take place in connection with feeding and emotions alone.'

Emotions of the Neonate

Some of the neonate's responses of crying, grimacing, withdrawing and smiling are at least outwardly similar to the emotional responses of older children.

However, it seems doubtful that infants of this age experience complex emotional states.

According to Watson (46), the new-born infant displays three primary emotions—love in response to stroking, fear in response to loud noises and loss of support, and anger in response to physical restraint. He believed that all other responses were built upon these primary emotions through the conditioning process.

Later research has failed to support Watson's theory. The response pattern that he denoted as fear, has been described in the current literature as the Moro-reflex. The love-response has been described as the state of homeostatis in which the infant's needs are temporarily met. The response described as anger is said to be the infant's reaction to an intense type of noxious stimulation, for example, extreme pressure, or a needle prick. Taylor (42) tried to reproduce Watson's experiment very carefully, but he failed to obtain the response pattern described by Watson. It has not been possible to differentiate the emotional states of the infants only by observing their overt responses. A knowledge of the stimulating conditions leading to the response, is essential for such differentiation. Even so, many aspects of emotional response seem to be unlearned and develop regardless of the child's experiences. Such responses are crying, kicking, withdrawal of head and face, smiling, laughing etc.

Sherman (39) studied the emotional development of new-borns by means of motion-pictures. On the basis of his investigation he concluded that emotional behaviour in the new-born infant is not differentiated beyond the simple feelings of 'pleasant' and 'unpleasant.' He accounts for the addition of other emotions on the basis of learning principles. Bridges (5) believes that specific emotions emerge from a general state of excitement in an orderly sequence.

It has been found that neonates show marked individual differences in susceptibility and responsivenss to all kinds of emotional stimulation. Children who are fearful and irritable after birth, are often found to maintain these characteristics throughout early infancy. Large individual differences have also been noticed among infants in the functioning of their autonomic nervous system and intensity of physiological changes during emotional experience. These differences are probably due to a combination of hereditary and pre-natal influences. In addition to these constitutional factors, maturation of the sensory capacities and learning play an important part in emotional development.

A notable characteristic of the infant's emotional make-up is that regardless of the stimulus, the emotional reaction is intense in character and sudden in appearance.

Many psychologists believe that differences in personality are visible from the first day of life. Some neonates are 'good,' others are 'irritable' and 'fussy.' These differences may be partly due to the developmental status of the child at birth, circumstances of delivery or health conditions.

Shirley (41) studied the personalities of babies from data obtained through periodic tests. She concluded that a 'nucleus of personality exists at birth and that this nucleus persists and grows and determines to a certain degree, the relative importance of various traits. Some change is brought by environmental factors, but this change is limited by the limitations of the original personality nucleus.' Her findings need to be supported by other research studies.

Our knowledge of the neonate's behaviour and responses is based on studies conducted mostly in Germany and America. We need to study the neonatal development of children in India, and to obtain accurate and detailed descriptions of the baby's responses and the stimuli that elicit those responses.

The innate emotional responses of neonates and the part that learning plays in their development, also need to be investigated. It is also important to find out more about the consequences of birth injury and prematurity on the later development and behaviour of the child.

The study of the new-born will help us develop better methods of infant care, and throw more light on questions such as the following:

a) Are there trends in psychological development which are not much influenced by environmental forces?

b) Do experiences during early infancy have a sustained effect on subsequent emotional development and behaviour?

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3

INTELLECTUAL DEVELOPMENT OF THE CHILD

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INTRODUCTION

Scientific study of the intellectual development of children may be said to have begun with the construction of the Binet-Simon tests of intelligence in the early years of this century. Practical considerations in the schooling of backward children led Binet to develop his tests of intelligence. These French tests were adapted and modified by Terman and Merrill in the U.S., and by Burt in England. Testing or measurement of the intelligence of children gained such quick momentum from the adaptation of the Binet-Simon tests that by the middle of this century, a vast literature on tests and intelligence was accumulated. Of the various psychological terms, perhaps the most popular was I.Q. Large-scale surveys of the distribution of I.Q. were undertaken; from them the curves for the growth of intelligence with age were [plotted. One consistent feature of such curves was the slow decline of intelligence after the early 'teen years' (1,3,15,61).

Tests of intelligence place emphasis on measurement of the products of development, rather than on the process. Tests were concerned with abilities. Thus, the focus was on whether the child of a particular age succeeded or failed in doing a particular task. Laboratory methods or methods of experiment, on the other hand, paid attention to the process of intelligent behaviour. How the child of a given age behaves in a controlled situation, was in dispute rather than whether he passes or fails in a test.

In the early twenties of this century the rise of behaviouristic psychology in the U.S. and gestalt psychology in Germany led to the development and use of the method of experiment in the study of specific intellectual behaviour in children. The experimental method was not concerned with intelligence and its measurement. It was concerned with processes of concept formation, thinking and learning in animals and children. Children of different ages were brought into the laboratory for study under controlled conditions.

In the meantime evidence was accumulating in the psychological and psychiatric clinics and hospitals, on the effects of disease, emotions, brain damage, etc., on intellectual behaviour and its development in the child. Instead of being content with just the I.Q., the clinical psychologist was opening the processes that enter into intelligent behaviour and their pathology. Thus, with the Binet-Simon type of individual scale of intelligence, the clinical psychologist computed the I.Q. on the basis of items passed. But he did not rest there. He started observing the errors or the items failed in and the processes which led to failure. He started noticing age-trends in this.

Development was not in the focus of studies with tests in schools and clinics or with experiments in the psychological laboratory. Towards the late twenties of this century, however, pure developmental studies were undertaken, i.e., studies where the focus was on development rather than measurement or diagnosis or theory. The work of Piaget, Isaacs, Gesell, Werner and others in this regard supplied the much-needed factual basis of process-data over the ages. The questions asked in such developmental studies were not confined to abilities or end-products of development, or the processes of specific intellectual behaviour under standard conditions. The focus was on understanding how development takes place, and not just on isolated processes or behaviour.

It is obvious, from the brief account given above, that it is not possible to consider all these in detail here. We will limit ourselves to the consideration of some salient features only.

Though intellectual development is our concern here, it should be clearly understood that it does not take place in the child independently of the rest of his personality. It is the child who develops, not just his intellect or language or emotion. The inter-relatedness of the development of several areas of the child's behaviour has many important and interesting points for consideration. Thus, for example, the language development of a three-year old child may have a lot to do with its intellectual development. But we will not consider such interactions here.

There are various theories of development, of intellect and of measurement. In discussing intellectual development, it is important to consider these theories. Thus, development may be thought of as accretion or cumulative addition of different elements that are differentiated at certain points in chronological growth. Intellect may be considered to be a group of specific abilities. The model for, measurement of abilities may be an *n*-dimensional space of orthogonal factors representing the abilities, and measurement of development may assume a logarithmic function of age for each increment in ability. All these theoretical considerations have implications for the design, method and tools used in a study and the interpretation and evaluation of results obtained. But a discussion of this kind will take us far out of the scope of this paper.

The plan of this paper is as follows: We will start with a discussion of the meaning of the terms intellectual, development, and child. A clarification of meaning will help us to delimit the scope of the paper. We will consider next the kinds of methods used in studying intellectual development in the child. The methods tell us more clearly what is meant by the term *in practice*. We will go on from a discussion of methods to the consideration of results of findings in terms of processes, stages and end-products of intellectual development. Any discussion of intellectual development, however, is incomplete without a consideration of factors which affect intellectual development. Such factors are broadly classified under genetic and environmental. We will not, however, go into the controversies around nature *vs.* nurture, or heredity *vs.* experience.

WHAT IS INTELLIGENCE ?

The words 'intellect' and 'intelligence' are used more or less synonymously. In psychology, the latter is the preferred term, because 'intellect' has metaphysical and literary connotations. It is not, however, an easy task to define 'intelligence'. In 1921, a serious attempt was made by psychologists to arrive at a consensus of opinion on the subject, through a symposium. The symposium showed clearly the differences in points of view. But it also put a stop to speculation. It was realised that, like electricity in the earlier days of physics, intelligence can be measured and used, though it cannot be logically defined. There has been little progress in definition since then, though measurement and use have gone considerably ahead. We will here consider two main points of view held by psychologists (61).

Biologically, we find that organisms have developed certain tropisms, reflexes and innate releasing mechanisms during the course of the evolution of species. The behaviour determined by any of these mechanisms is adaptive for certain kinds of environmental demands. The same behaviour under certain other kinds or circumstances may not enable the organisms to survive, i.e., may become mal-adaptive. When, in the face of changing environmental conditions or demands, an organism can so modify or change its behaviour that the result is adaptive, the *behaviour* can be described as intelligent behaviour. The organism can be said to be using a *capacity*, called intelligence, when such behaviour is seen to take place frequently. The more difficult the change required, the more is this capacity involved. Thus, learning, adaptation, flexibility and profiting from experience seem to be involved in intelligent behaviour.

There is nothing wrong with the biological point of view, but it does not seem to give enough importance to the species, *homo sapiens*. In man, intelligence is seen in various kinds of adaptive, expressive and creative behaviour. Psychologically, it is important to know what goes on in the organism which makes such intelligent behaviour possible. Even if intelligence be regarded as the capacity to produce adaptive behaviour in a changing situation, it is necessary for psychology to identify what constitutes this capacity. Hence, *psychologically*, intelligence is identified with problem-solving, reasoning, abstract thinking, critical thinking, creative thinking, relational thinking, planning, foresight, judgment, comprehension, etc., all or each of which can be regarded as a mediation process intervening between the environmental demand for change and the adaptive behaviour that follows. Factor analysis of intelligence tests shows that there is a considerable overlap among these processes, as also clear differences. There is an increasing acceptance of the idea based on such evidence that intelligence is not a unitary function. It is a group of abilities which can be measured in ways which will emphasize the common factor of the specificities. It also appears from the tests used by psychologists that relational thinking and problem-solving form the major part of intelligence.

WHAT IS DEVELOPMENT ?

Development is basically a process of change; but it is not any change. It is a sequential and not a sporadic or erratic process of change. Though the question of continuity and discontinuity has been raised in this connection, the development of the child is by and large considered to be a continuous process of change over time. Perhaps, more controversy has been raised over sequence, order and reversibility-irreversibility of processes than anything else in child development. Again, the consensus of opinion is in favour of regarding development as a continuous, orderly or sequential process of change over time, which is also irreversible. An important characteristic of development is that the change is progressive, i.e., leading to greater differentiation and complexity of the system undergoing change. In this sense growth is used synonymously with development (22).

In considering the development of intelligence, one can distinguish between the process of development, stages of development and the end-products of development. One can also consider intellectual development differently. Thus, it is possible to think of this as development of structures, functions and abilities with increasing age. One can describe for each age group of children what the typical intellectual structures are e.g., images, ideas, beliefs; what the typical intellectual functions are, e.g., associative thinking, naming, classifying, abstract thinking, reasoning; and what the typical abilities are, e.g., verbal reasoning, space visualisation, quantitative thinking etc. One may, also, select certain key intellectual functions and abilities, like logical thinking or ability to deal with numbers, and observe the process of their development(22).

Who is a Child?

Ordinarily, this question seems superfluous, pedantic or insignificant. But for any discussion, it becomes important, because the semantic reference to 'child' admits of difference in usage. Thus, one may use the word 'child' with reference to an adult when one wants to convey one's impression of the adult's mentality, or when one wants to communicate a relationship. Some adolescents are referred to child guidance clinics and are referred to as 'child' in case reports. In such cases, the age limits may go up to 16 or 17. In developmental psychology, childhood is a stage of development beginning approximately at the end of the first year after birth and extending up to 12 or 13, around which time the pubertal changes begin to take place. Roughly, one can say that the teenages are the adolescent years and the first year after birth is infancy. Thus childhood has a span of 11 years from the beginning of the second year to the end of the twelfth year(39).

Methods Used

Methods used in studying the intellectual development of the child range all the way from uncontrolled or naturalistic observation to controlled observation in the laboratory, from a study of global behaviour to specific responses, from questionnaires to standardised tests, from large sample cross-sectional questionnaire studies to small sample longitudinal tests and clinical observations.

Various kinds of intelligence, reasoning, and perceptual tests have been used extensively to study abilities in the developing child. Factor analysis has been a favourite statistical method for the solution of such problems as whether intelligence is a unitary or composite trait, whether there is a differentiation of abilities with age, what the abilities are in each age-group and so on. The Stanford Revision of the Binet-Simon Tests of Intelligence, the Wechsler Intelligence Scale for Children, Raven's Progressive Matrices and Thurstone's Tests of Primary Mental Abilities are among the more frequently used tests in this field(61).

Experiments on children's learning, problem-solving, concept-formation and thinking began quite early in the century. At the beginning the methods used in studying animal behaviour were borrowed without any major change and used for comparative psychological research with children as subjects. Thus, mazes, including temporal mazes, were used. Such methods, however, became much more sophisticated in the hands of Lewin and his associate at Iowa. Special laboratories were erected for child study. In studies on concept-formation in children, a distinction is usually made between what is called concept-learning and concept-discovery.

Concept-learning is said to have occurred when the child learns to give one response to a set of stimuli which have something discriminably in common and another response to a different set of stimuli, which also have something discriminably in common, the common discriminable characteristic of the one set being different from that of the other. *Concept-discovery* takes place when the child learns a rule from concept-learning and transfers it in responding to a new set of stimuli, or generalises it to a class of stimuli. The techniques used for studying these processes in children are card-sorting, paired-associate learning with anticipation and simple discrimination learning. Those who emphasize language in concept-formation, thought processes and problem-solving have used vocabulary and word association tests. Where classificatory behaviour is at issue, tests of a performance type have been used under the historical influence of Goldstein's study of concretistic *vs.* abstract thinking of brain-damaged children (49,50).

Among the methods used in such studies, Piaget's method is in a class by itself. Piaget combines observation and experiment, interview and questionnaire in his genetic, developmental or 'clinical' method, as he calls it. Most of his earlier studies were done only on his children. Generally described, his method is a kind of exploration in which crucial experiments are suggested by previous observations. For the study of a child's beliefs about the world around him, he used a more clinical method. The technique is to ask the child questions regarding some belief about the world. But the questioning takes place in real-life situations rather than in the laboratory or clinic. The questions are not standardised. It is a free conversation between an understanding adult and a child about the names of objects, stars, planets, machines, space, time, etc. The questioning is done with a view to directing the child's thinking towards an exploration of what is in the periphery of or implicit in his thinking. Hypotheses are formed on the spot and crucial questions are asked to accept, modify or reject these hypotheses. In studying the logical and scientific thinking of children, Piaget used simple but ingenious techniques combining experiment with questioning and observation.

Process of Intellectual Development

We have considered earlier the general nature of development. Here we will examine the specific features of the process of intellectual development.

Like other biological systems, the human organism develops through differentiation and integration of structures and functions. In the intellectual development of the child we notice similar processes. Thus, there is a differentiation of abilities with age. Though the evidence on this point is not entirely clear, by and large, psychological opinion and practice seem to be in favour of this stand. Similarly, there seems to be integration of concepts, schema, patterns of behaviour with increasing age. That intellectual development involves these processes is clearly illustrated in children having feeble-mindedness, brain-damage and certain kinds of psychiatric disorders. One can see in such cases the failure of the processes of differentiation and integration leading to the arrest of development(7,9,11,33,61).

Changes in the electrical activity of the brain have been studied with children in the course of their development. Certain kinds of changes in the EEG curves, like the gradual decline of delta activity in childhood and the emergence of the adult type of alpha rhythm during adolescence, have been observed. Studies of such changes in the EEG curves suggest that during the course of child development there are systematic changes in the functioning of the brain. But the attempts which have been made to correlate the EEG patterns with stages of intellectual development have met with little success. Apparently, we need to know much more about the changes that go in the brain with the intellectual development of the child. But the changes in the EEG patterns over the years of childhood show a gradual decline in irregularity or an increase in the rhythmic pattern of the adult type (56).

In the process of development one can recognize successive levels of organization. Thus, at any stage of child development, one can see, as Gesell did, some organization of adaptive behaviour. Over the years one can see successive levels of such organization. The later the age, the higher is the level of organization. A later level is higher in the sense that it subsumes the earlier level. Thus, what the child does at age ten includes what the child could do at an earlier age. Development is cumulative. Particularly, in the intellectual development of the child, one sees this aspect of language, thinking and problem-solving behaviour. A higher level of organization also means more efficient behaviour. A child of ten does arithmetic more efficiently than a child of six. The notion of mental age in intelligence-testing is based on this observation of increasing efficiency with age. In factor analysis of intelligence tests, we find this organization aspect of development in the form of higher 'g' saturation with increasing age of the child. The difference between higher and lower levels of organization is also to be found in thinking and problem-solving where we find progress from the concrete to the abstract, from primitive, egocentric, animistic thought-processes to the logical, abstract thought-processes (7,11,36,61).

Though age-specific trends have been observed by many workers in this field, the evidence seems to indicate that such trends are general rather than specific and individual differences cannot be ignored. Thus, though it is possible to estimate the age of the child from what he does or tends to do, there is likely to be some error in such an estimate, and for individual children, such an error may be large indeed. But some mothers, pediatricians, and child psychologists can also recognise general trends that go with range of age and, therefore, may make a rather close estimate of age by observing the child's physical maturity alongside behaviour. However, the rate of development varies with individual children, so that one child may be more advanced than another of his age. Besides, the rate is not constant over age and over abilities or processes. That is, a child may develop rapidly, say, up to six and, then may slow down for two years; or a child's vocabulary may increase faster than his numerical ability. If intelligence were a unitary function, the differential rate of development of part-functions of intelligence would not have been observed (10).

The curve of mental growth or of intelligence is quite well-known. It is a curve plotted against age, showing how intelligence or general mental ability grows with age. Several kinds of curve have been proposed. There is agreement over the fact that intelligence increases with age. But the shape of the curve varies with different workers. Some think it should be like an inverted J-curve with the inversion being through 90° only. Some think it should be a straight line with about 60° incline. Some think of loops, and so on. The simplest, and the one which seems to accord with recent thinking on the subject, is a straight line with about 60° incline. The process of intellectual development in childhood is one of rapid increase with age. After childhood there is still increase but relatively little as compared with childhood (56,61).

Though the process of intellectual development in childhood is represented graphically by a straight line rising at an angle diagonally from the intersection of coordinates, it is not all smooth. There are periods in the development of a child when it looks as if no progress is being made, as it appears in the 'plateau' of a learning curve. Gesell's observations show that there are spurts of growth, when the rate of development is suddenly heightened. Though there is a continuity, a progress from the concrete to the abstract, from egocentric thought to logical thought, from field-dependent concepts to field-independent concepts, from primitive, vague or diffuse organization to sophisticated, clear and articulated organization, the process is saccadic, i.e., by jumps. This aspect of development can be conceived of as a process of equilibration, where one sees disequilibrium or relatively unstable states and stable states following upon one another. Those who would like to emphasize this characteristic of intellectual development can imagine a step-function, increasing with age, as the model. Instead of a straight line, it would look like a series of steps. Again, it is worth bearing in mind that this is a theoretical model and that there are large individual differences in the rate of development(56).

The foregoing discussion about the nature of intellectual development highlights certain features only. If the impression is created that development must take place in a child, it may be pointed out that the phenomena of regression and fixation, observed by psychoanalysts, and of mental deficiency, particularly, show clearly that development may proceed up to a point in a particular child and stop. In some children under certain conditions of severe stress or deprivation, one may even see a regression rather than just arrest in development. But to consider these phenomena of failure to develop will lead us into the big question of irreversibility-reversibility of development and of heredity-environment interaction with development. The question of failure to develop has been touched upon only to bring home the point that the process of development charted out earlier reveals itself under certain conditions only (56).

Stages of Development

A stage of development is characterised by a relatively stable organization and a steady rate of change. When there is a change in the rate and relative instability in organization, and when this is followed by a settling down of the rate and of the instability or disequilibrium, the child may be said to have passed from one stage to another. In Piaget's theory of development, stages are characterised by the emergence of a new level of organization of behaviour which also integrates with it the previous level, i.e., higher order schemata are formed by incorporating lower order schemata, and these higher order schemata become interrelated in certain ways, making it possible for the child to operate at a higher level of abstraction. The notion of a stage is qualitative in Piaget's theory, whereas for other psychologists it is quantitative as well as qualitative. Quantitatively, a stage is characterised by a steady rate of change and is preceded and followed by a change in the rate. The two nodal points or points of inflection in a hypothetical curve of rate delimit a stage. But a stage is not just a derivative of an exponential function; it is a condition of the organism in which certain kinds of things happen. What happens is stabilisation of new structures and functions. This is the qualitative aspect of it. Qualitatively there is a new organization of intellectual structures and functions. We will follow here the stages of development outlined by Piaget and his associates, as the notion of stages of intellectual development has received more impetus from their work than from anybody else's.

According to Piaget, the unit of intellectual development is a *schema* which means a unitary behaviour pattern. Not every pattern of behaviour, however, can be a schema. When a pattern of behaviour is elicited by a stimulus (not necessarily the same) in a predictable manner, and can be coordinated with other patterns of behaviour, it can be called a schema. One may compare this notion with that of Head and Bartlett. Piaget distinguishes three stages in the development of schemata. The earlier is the sensori-motor stage, which is followed by a stage of 'concrete operations,' or egocentric intelligence. The third stage is the stage of logical abstract thinking or of 'formal structures'.

There are six sub-stages in the first stage of sensori-motor intelligence: (1) reflexes, (2) primary circular reactions, (3) secondary circular reactions, (4) means-end behaviour, (5) invention of new means by experimentation, (6) internalization of sensori-motor schemata and detour behaviour.

In the first month, the reflexes of the new-born are exercised and improved, e.g., sucking. This is a sensori-motor schema which improves during the first month.

In the second sub-stage which ends by the fifth month, the child develops new behaviour patterns which continue rather than reduce stimulation, e.g., thumb-sucking. It is a circular reaction in the sense that the response starts the stimulation afresh. Similarly, prehension of objects appears at this stage. The child reaches for and grasps an object seen, so that it may continue to look at it or suck it. An integration of the schemata of looking and grasping or of looking, grasping and sucking takes place. Similar circulatory response occurs in the next five months in the third sub-stage, the difference being in the fact that a new schema is created and repeated; after it is accidentally produced. There is a decrease in the reflex-like character of activities, and problem-solving strategies begin to make their first appearance in simple but new sensori-motor activities, like hitting, kicking etc., on appropriate occasions. The last three months of the first year mark the beginning of means-end behaviour which characterises the next sub-stage. A schema is used as a means to an end. Thus, hitting appears in the earlier stage, but is used in this stage for removing barriers to a goal. Curiosity and exploratory behaviour is possible now, because schema learned in another context of motive and stimulus can now be used in another situation.

The first six months of childhood, beginning with the second year after birth, bring the child through the next sub-stage characterised by discovery of new means by experiment. The child can vary its behaviour deliberately, even though the situation remains the same. In the course of problem-solving, it can discover new schemata. Already, in the previous stage, schema became relatively independent of the original context so that instrumental behaviour is possible. Now, the schema becomes more independent and there is more control of it. Also, the child, instead of just repeating a few activities, begins to perform new activities spontaneously. Play in the real sense begins to appear. He is no longer satisfied with just repetition; he must do something new. He is beginning to initiate action. This experiment and creativity make the development of more comprehensive schema possible. By the end of one-and-a-half years, the child enters into the last sub-stage of sensori-motor intelligence. One sees a perfection of the earlier stage. Delayed reaction, detour behaviour and strategies for problem-solving begin to take root.

Two sub-stages are distinguished in the next stage of development, called the stage of concrete operations or ego-centric stage. One is a period of formation from one-and-a-half to seven years and the other is a period of equilibration from 7-11 years. During the period of formation, the change from sensori-motor intelligence comes through the appearance of symbolic function in the child.

The period of formation is a period of 'concrete operations' or egocentric, field-dependent and somewhat concretistic thinking. Though symbolic processes have started, these processes are still very dependent on the stimulus. Piaget calls this characteristic 'concrete operations', noticed particularly in 'irreversibilitity of mental actions'. This is illustrated by ingenious experiments conducted by Piaget and his associates. For example, if water is poured from a tall narrow glass into several smaller ones, the quantity of water remains the same. But it is not so, for children up to six years of age. They cannot cancel mentally the operation of pouring water into several glasses and so cannot see that it is the same quantity of water. In another experiment, two boards of the same size represent two grazing grounds for two cows. Fourteen toy houses of the same size are placed on one board in a row. The same number of houses are placed haphazardly all over on the other board. The child is asked whether the two cows, one on each board, have the same amount of grass to eat. Children up to six years find it difficult to accept the idea of equality of surface left after subtracting the space occupied by the 14 houses. This illustrates 'irreversibility of mental action.'

In the second sub-stage of ego-centric intelligence, called the period of equilibration, beginning around seven years, the child attains 'reversibility' of mental operations which makes it possible for it to solve arithmetical and logical problems of classification and series. Around eight years the child is able to solve geometrical problems as well as problems of time. The child's concepts show in this period relative independence of the concrete objects and operations; in other words, there is an advance in the level of abstraction and true symbols make their appearance in the child's thinking. Hence, the third stage of 'formal operations' or logical abstract thinking, at the end of childhood becomes possible after this period. The observations of Piaget and his associates show these stages in the child's thinking about objects, space, time, number, scientific principles and ethics. Exact age-limits for the various sub-stages and stages are not important. What is important is the sequence. More controlled studies are under way in Western countries to see to what extent Piaget's formulations and observations about sequence are corroborated.

End-Products of Development

Tests have been used to observe what a child can do at each age level. Abilities have been abstracted out of the performances of a large number of children on a large number of tests. As pointed out earlier, factor analysis has been the major tool used in achieving this aim. Though evidence is inconclusive and conflicting, the trend of data suggests that in childhood there is a general intellectual ability, which emerges as 'g' saturation of tests, and which increases with age throughout childhood. But there is also a development of common factors of verbal comprehension, quantitative thinking and spatial-perceptual processes. These may be found as common factors as early as six years. Factor analysis of the longitudinal test data collected by Bayley in the California Growth Study suggests three factors : (1) sensori-motor alertness up to 20 months, (2) persistence, 20-40 months, and (3) manipulation of symbols, 40 months onwards. An examination of pre-school intelligence tests shows that these tests primarily involve simple manipulation, discrimination and attention. Tests for the school years, on the other hand, involve abstract reasoning, analogies, vocabulary, common sense, memory, interpretation of pictures or proverbs and sentence completion. The change from sensori-motor processes to symbolic processes is obvious. Though the tests show this result, many psychologists think that the abilities of problem-solving, reasoning and concept-formation are present in the pre-school years. Thus, a distinction is drawn between the materials and the process of thinking. The materials of thinking are the percepts, memories, images and concepts. The processes are associative thinking, critical thinking, creative thinking and problem-solving. The pre-school child seems to have the processes, but has much less of the materials, as compared to the school child. The age difference, in other words, appears in the materials handled or used, and not much in the processes of thinking.

Whatever the processes, tests of intelligence are concerned with end-products, achievements and performance. Standards of excellence and the difficulty level of task are at issue, rather than the processes used by the child in doing a task. This is well-illustrated in the Stanford-Binet tests, where we have standard tasks for each age level. The tasks are standard in the sense that an average child of the age level for which it is meant, should be able to do it. Thus, a child of two is expected to build a tower with blocks, but a child of three should be able to build also a bridge. At three years a child can copy a circle, at five a square and at seven, a diamond. A child can repeat three digits at three years; at four-and-a-half years it can repeat four digits; at seven years, five digits; and at ten years, six digits. Vocabulary shows a development in meaning from example and use around six years, through characteristics to synonyms and knowledge of abstract words, such as pity or envy, around twelve years. When a child of six cannot do the tasks set for its age, his ability is lower. If he can do the tasks for a five-year old, but not for the ages above five, his *mental age* is five, though his chronological age is six. It means he is like an *average* five-year old. The ratio of the two ages, mental and chronological, multiplied by a hundred, is called the Intelligence Quotient ($\text{I. Q.} = \frac{\text{M.A.}}{\text{C.A.}} \text{x } 100$). It is a developmental index showing whether the abilities of the child measured by a particular test are more than, the same as, or less than the ability of an average child of his age. As a measure, I.Q. has many difficulties. But its popularity far outweighs the criticisms against its use as a measure of intelligence (57).

Conditions that Affect Intellectual Development

A discussion on intellectual development is not complete without at least mention of the various conditions which affect such development. A complete consideration of all the conditions and, particularly, of the way such conditions, singly or in combination, affect the child's development, is outside the scope of this paper. There is a rather large number of studies, beginning with the classic ones of Galton early in this century. Besides, a complete discussion of conditions is bound to lead us into the age-old controversy over heredity and environment as determinants of intellectual development. We shall, therefore, be content here with a bird's eye-view of the important conditions which affect development. It should, however, be clear that development is a joint product of heredity and environment. The interaction of these two factors in producing an effect on intellectual development is quite complex; so much so, that it is not possible to assign proportionately their respective contributions to the effect whether in groups or individuals.

The influence of genes on intellectual development is a theoretically acceptable notion. What Hebb calls Intelligence A, which is largely a potentiality of the nervous system to form 'cell-assemblies' and 'phase sequences' so necessary for the development of schemata or patterns of behaviour of increasing degree of complexity, is largely determined by the genes. Such theoretical statements, however, should not lead us to expect simple correspondences or correlations between 'good' heredity and 'high' intelligence. The correlations between twins, siblings, parent and child are not solely due to heredity. Inheritance, in modern genetics, is not a simple matter, so that bright parents cannot be expected necessarily, to provide a 'bright' genetic potential for their off-springs. What the bright parents could be more reasonably expected to do is to provide a better environmental setting and training for the child to grow.

Among environmental conditions, the earliest in the life of the child is the womb of the mother. There is some evidence that at certain stages of the development of the embryo, the intra-uterine conditions may cause irreversible damage. Thus, a disease of the mother, like German measles, may impair the growth of the embryo. Similarly, nutrition of the mother may affect the embryo. After birth, disease and nutrition in infancy are equally important conditions. Some diseases may destroy cortical tissues or slow down the process of myelination.

The family of the child, as may be expected, plays a very major role helping or hindering the development of the child. It is in the family that the child acquires during its first five years of life, the materials, for its thinking, which prepare it for the primary school. The richness of the home environment is reflected in the higher I.Q. of the upper class child, as much as higher genetic potential due to selective breeding. The home provides the child with a variety of intellectual experiences which stimulate the growth of the child. The relation between social class and intelligence, and parental occupation and intelligence, has this one common factor, viz., the richness, stimulation, variety, etc., of the child's home. Apart from this, however, we know that emotions affect the intellectual development of the child and, sometimes, very markedly. A child gets emotionally disturbed by conflicts, arising out of his interaction with parents. Such children, in spite of a genetic potential, may show an arrest of development. Proper treatment of the child in child guidance clinics often results in sudden progressive changes in development. The total effect of the home has been conceptualised by some as 'atmosphere'. It has been found that a 'democratic' atmosphere is more conducive to development.

Beginning with entry into the primary school, the child is influenced considerably by the educative processes in and around the school environment. The parent's concern about sending their child to a good school is not entirely unfounded. The average I.Q. of the child going to better schools is higher for reasons of the selection as well as of learning experience provided by the school. But, at least, the stimulation by boys of higher I.Q. is a fact in better schools, which may act positively, like the rich home environment of brighter parents of higher socio-economic groups. In so far as learning enters into the Intelligence B of Hebb, or intelligence as meaured by tests, or, simply, mental efficiency, it is not surprising that the school will have an influence on the intellectual development of the child. The school years from six to 15 are also a period of rapid learning.

The last broad group of conditions can be subsumed under social class and culture. Many studies show the relatively higher I.Q. of urban children as against rural ones, of upper class children as against those of the lower classes. Instead of regarding such evidence as proof of higher innate capacity, it is more or less recognized today as an indication of the differential effect on the development of abilities, and not innate capacity, and that the effect is a joint product of genetic potential and environmental conditions associated with upper class or urban residence. That the relationship is more complex is seen in the Scottish survey of intelligence repeated after a long lapse of time. There was a mean gain in I.Q. over the years. This was attributed to the complex technological, social, economic and cultural changes that had taken place in the meantime. Thus, one condition may counter-balance the effects of another condition. One may expect a decrease in mean I.Q. with a decrease in family size. But the decrease may be offset by an increase owing to socio-economic, educational, technological and cultural changes. In our country, we may, thus, expect a rise in mean I.Q. over a decade or two, though, as a result of our efforts, the average family size may be smaller than it is now (2,4,61).

CONCLUDING REMARKS

A vast literature on the subject has been accumulated since the early years of this century. Much has been accomplished by way of fact-finding, technical progress, methodological improvement and theoretical development. But problems still remain, as do controversies over theory and method. However, a major 'break-through' seems to have been achieved by Piaget and his associates in Geneva, though one may have methodological objections against his studies.

In this area, our knowledge is rather poor about the Indian child. Most Indian work seems to have been test-centred. Such studies show that the intellectual abilities measured by the tests develop in the same way as in the West. To what extent this is an artifact we do not know. Carefully controlled experiments in different parts of the country should go a long way towards extending our knowledge about the Indian child.

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4

EMOTIONAL DEVELOPMENT OF THE CHILD

B. Krishnan

Emotions play a significant part in one's life. A popular saying indicates that human beings are 'specks of intelligence afloat on seas of emotion'. Joy and sorrow, delight and depression, excitement and relaxation, anger and fear and a host of other feelings and emotions impinge on the personality. When one is caught in the throes of emotion one is likely to behave impulsively. If one looks back into the momentous events of the history of a nation or country, one discovers their origin, often in an emotional background.

Both emotions and feelings are states of affective experience. Some psychologists prefer not to make a distinction between the two, whereas others distinguish them on the basis of the intensity of affective experience. The latter consider that feelings are mild and exist as dull background states, whereas emotions are very strong, stirred-up feelings or experiences. Aesthetic feelings, annoyances and sex feelings could be brought under 'feelings.' Anger, fear, rage, love and jealousy are referred to as emotions.

BEGINNINGS OF EMOTIONAL BEHAVIOUR

Several opinions are expressed regarding the early manifestation of emotions. Some are of the view that emotion is the result of learning and maturation. A few others think that the infant is capable of emotional experiences at the time of birth, if not earlier. Freud (9) writes that even the foetus can have feelings, though he recognizes that the human infant 'is sent into the world more unfinished'. Rank (31) speaks of the trauma of birth and maintains that the new-born child is subject to anxiety. He relates phobias to the traumatic experience of the child at birth. Susan Isaacs (18) is of the opinion that though the infant lacks knowledge and understanding, it exhibits wants, fears, anger, love and hate from the beginning of life.

John B. Watson (36) was a pioneer in initiating an experimental approach o the study of emotional responses of infants. He presented various kinds of stimuli to neonates and recorded their reactions. His observation showed that new-born infants exhibited three kinds of unlearnt emotional responses, namely, fear, rage and love. He postulated that all emotional reactions experienced by older children and adults are the outgrowths of these three primary emotions.

Though Watson's conclusions are not borne out by subsequent researches, his work is important in two respects: (*a*) he was the first to introduce objective methods into the study of emotions; (*b*) he rejected the heredity theory of emotion and this became a significant step in generating research and understanding of emotional behaviour.

Sherman (32) carried out a study on two infants less than a week old. He took a motion picture of the infants as they were being dropped from a height; while they were pricked by a needle; when the physical movements were restrained; and when they were hungry. The films were shown to a group of nurses, medical students and students of psychology. There was considerable agreement in the identification of emotions. Later, Sherman cut the film and joined it so that there was an interchange of stimuli and responses. When this movie was shown to the observers they were unable to identify the actual responses. There was marked inconsistency in their judgment of emotional reactions.

Sherman (32) conducted another experiment on babies. He kept the babies behind a screen when the stimuli of pricking, dropping or restricting the bodily movements were applied. The observers were asked to identify the stimulus used to excite the babies. The observers were unable to recognize the provoking stimulus and there was inconsistency in the judgment of emotion when pronounced without the knowledge of the appropriate situation. These studies indicate that clear-cut responses, as Watson pointed out, may not exist in the emotional reactions of the infants. On the other hand, Sherman points out that 'aimless activity of most of the musculature' occurs in infants irrespective of the stimulus applied.

Irwin (17) studied the reactions of 24 infants under the age of one month, in a situation supposed to produce fear. He dropped the infants a distance of two feet before catching them. His results showed the presence of some movements in 88 per cent of them. Forty-six per cent of these movements belonged to the arms, three per cent to the legs and 51 per cent to both arms and legs. No external response was observed in 12 per cent of the cases.

Another study may be mentioned as a criticism of Watson's work on emotions. Pratt, Nelson and Sun (29) used 66 infants less than three weeks old to study the restriction of physical movements, by compressing their nostrils from five to 15 seconds to prevent breathing, and then by holding their arms against their body. The purpose was to produce anger and verify the pattern of responses as indicated by Watson. The results showed generalised reactions rather than any distinct pattern of responses.

Bridge's (3) work is classic in the study of emotions. She has made extensive studies on babies ranging in age from birth to two years in a foundling home. She noted that the new-born responds with an undifferentiated excitement to any kind of emotional situation. As a result of maturation and learning, differentiation from the general excitement takes place by about three months of age. Distress and delight are the emotions to emerge first. Distress is characterised by crying, gasping and muscular tension. Delight is indicated by smiling and muscular tension. If distress attends an unpleasant situation, delight follows a pleasant one. Distress becomes differentiated into anger, disgust and fear by the time the infant reaches six months of age. A little later, delight is found to branch off into elation and affection. Jealousy appears from distress by about 18 months of age and at this age affection is shown for children and adults separately. Between the ages of 18 and 24 months, the emotion joy, becomes differentiated from elation and affection on the side of delight. Fig. 1 gives a graphical representation of the differentiation of emotions as given by K.M.B. Bridges. The figure represents the development of emotion up to the age of 24 months. This does not necessarily mean that the emotional development stops at that age. Studies have shown that as one advances in age, maturation and experience increase the variety of emotional responses in one's life.

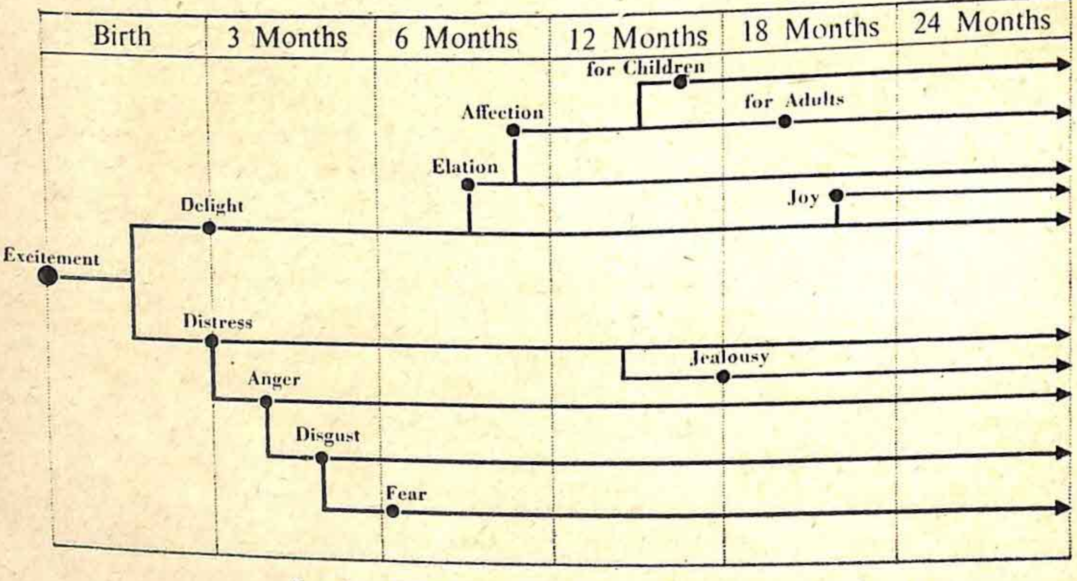

FIG. I. THE DIFFERENTIATION OF EMOTIONS
(From Bridges, K.M.B. (3) *A Genetic Theory of Emotions. Journal of Genetic Psychology*, 37,514-527)

Tables 1, 2 and 3 as prepared by Nagarathna (27) give the studies of a few investigators regarding the first appearance of emotions like fear, anger, smiles and laughter in children. Some of the situations which bring about the appropriate emotional reactions are mentioned in the tables. Tables 1 and 3 are prepared from different sources and Table 2 from the writings of Goodenough (11, 13).

TABLE 1. REPRESENTING SITUATIONS WHICH CAUSE FEAR

Serial no.	Situations	First appearance
1.	Organic pain	From the time of birth (Watson) (36)
2.	Loss of support	-do-
3.	Sudden loud noise	-do-
4.	Sudden changes in the visual presentations	End of second month (Preyer) (30)
5.	Deep voices, masked faces and strange faces	Seventh month (Preyer)
6.	New and odd sounds like the imitations of the voices of animals	Eighth month (Preyer)
7.	Barking dogs	Ninth month (Preyer)
8.	Fear of persons in black dress even when they are friendly	Seventeenth and eighteenth months
9.	Carried close by sea	Twenty-first month
10.	Sight of dogs	Second year
11.	Sight of snakes	Above two years (Jones) (22)

TABLE 2. REPRESENTING SITUATIONS PROVOCATIVE OF ANGER

Serial no.	Situations	First appearance	Peak frequency
1.	Hampering movements	From the moment of birth	Under one year
2.	Minor physical discomforts (wet clothes etc.)	Under one year	-do-
3	Impatience at having to wait for feeding	-do-	-do-

TABLE 2.—(*Contd.*)

Serial no.	Situations	First appearance	Peak frequency
4.	Thwarting of movements of withdrawal	Under one year	Under one year
5.	Being put to bed forcibly	-do-	-do-
6.	Objections to specific kinds of food	-do-	-do-
7.	A general desire for attention	-do-	-do-
8.	Desire for food between meals	-do-	-do-
9.	Not permitted to carry out desired activity	One year-One year 11 months	One year-One year 11 months.
10.	Adult assistance forced upon the child	-do-	-do-
11.	Inability to make desires understood	-do-	-do-
12.	Forcibly taken to meals when the child wishes to play	-do-	Two years-Two years 11 months
13.	Routine physical habits interfered with	-do-	-do-
14.	Resentment at punishment	-do-	-do-
15.	Resentment at having to take logical consequences of one's own act	One year-One year 11 months	-do-
16.	Unsuccessful attempt to manipulate some object	-do-	-do-
17.	Mother's impatience at child's slowness	Two years-Two years 11 months	-do-
18.	Desire to share in the activity of others prevented	Under One year	Three years-Three years 11 months.
19.	Unwillingness to share possessions	One year-One year 11 months	Three years-Three years 11 months
20.	Desire for someone else's possessions	-do-	-do-
21.	Disagreements with playmates	Under one year	Three years and above.
22.	Refusal of adult help to perform activities	One year-One year 11 months	Four years and above
23.	Refusal to perform some small task	Two years-Two years 11 months	Four years and over.
24.	Objection to some particular article of clothing	One year-One year 11 months	-do-

TABLE 3. REPRESENTING SOME OF THE SITUATIONS IN RELATION TO THE FIRST APPEARANCE OF LAUGHTER AND SMILING

Serial no.	Situations	Laughter	First appearance of smiling
	I. Laughter of Pleasure		
1.	Satisfaction after hunger has been fully appeased		26th day (Preyer)
2.	Bright coloured objects (as moving tassels of bright colours hung over the cradle)	50th week (Preyer)	23rd day (Preyer)
3.	Hearing musical sounds (as the piano)	Eighth week (Preyer)	
4.	Joy at familiar and pleasing impressions (as the face of mother)	Six to nine weeks (Preyer)	
5.	Sight of toys	End of fifth month (Hatzer) (14)	
6.	Awakening from sleep	End of eighth month (Hatzer)	
	II. The Social Smile		
7.	Smile of the familiar adult		26th Day (Hazter)
8.	Sight of a friendly person	End of second month (Hatzer)	
9.	Chirrupping and talking to the child	Three months (Washburn)	Two months Washburn (37)
10.	Friendly nodding of adult		Sixth month (Preyer)
11.	Laughter at mirror image of oneself	8 months (Preyer)	
	III. Laughter of Defeat or Mild Thwarting		
12.	Peek-a-boo (cloth between examiner and child)	4—6 months (Washburn)	2-4 months (Washburn)
13.	Rhythmical kneedrop	5 months (Washburn)	3 months (Washburn)
14.	Threatening head (sudden booing near face of child)	4 months (Washburn)	4 months (Washburn)
15.	Elevator play (sudden raising and lowering of child)	6 months (Washburn)	4 months (Washburn)
16.	Tickling	6 months (Washburn)	4 months (Washburn)
17.	Rhythmical hand clapping	5 months (Washburn)	5 months (Washburn)
18.	Sudden appearance	6—11 months (Washburn)	5 months (Washburn)
19.	Tumbling on the floor, while sitting	8 months (Preyer)	
20.	Unexpected sounds (adult imitating birds and animals)	9 months (Preyer)	
21.	Effort to stand with support	9-12 months (Preyer)	
22.	Strange, masked faces	10-11 months (Preyer)	
23.	Playful disobedience or defiance of adults	10-11 months (Preyer)	
24.	Nervous, self-conscious laughter at being noticed	10-11 months (Preyer)	

Characteristics of Children's Emotions

Hurlock (15, 16) has listed a few characteristics which distinguish children's emotions from those of adults. When children become emotional, they react with the same intensity to a trivial situation as they do in a serious situation. It may be joy or sorrow, anger or fear, but the emotional outburst will be of the same intensity, irrespective of the magnitude of the situation. As they grow up, they learn that extremes in emotional behaviour are childish and so start exercising control over their emotions.

Children's emotions are brief and transitory. A child experiences an emotion for a few minutes and this is likely to come to an abrupt end. In older children and adults the emotions aroused continue for a much longer period.

Children exhibit their emotions more frequently than adults. In a day a child may run through a larger gamut of emotions than a grown-up. But with age, the child experiences the impact of society and tries to restrain its emotional expression.

Children of the same age react in a variety of ways to similar situations. Their reactions are flexible. Advance in age delimits the scope of an emotional response appropriate to the situation. Age also brings about a change in the strength of emotion. Some emotions become weaker and some stronger as children grow.

INFLUENCE OF MATURATION AND LEARNING

Maturation and learning play an important role in the development of every aspect of behaviour. The growth and development of the sensory processes, muscular actions, intellectual functions and emotional reactions are influenced by the factors of maturation and processes of learning. As both of them are closely interrelated, it becomes difficult to study the influence of one to the exclusion of the other in many situations. Yet studies have been made to evaluate the role of each in understanding human development.

Maturation

Studies conducted by H.E. Jones and M.C. Jones (22), Gesell (10) and Goodenough (12) may be cited to indicate the influence of maturation on the development of emotional reactions. Jones and Jones presented a harmless snake to a group of 50 children and 90 adults. It was found that children up to the age of two, showed no fear of the snake. Between the ages of three and three and a half, the children showed hesitation in approaching and touching it. But children of four years of age exhibited a fear reaction. Adults, of course, experienced marked fear. The investigators explain their results in terms of the general level of physical and intellectual development.

Washburn (37) supports the view of Jones and Jones with her observation on the social smile of infants. She observed that infants between eight and 20 weeks of age showed smiling responses to any human face, whether strange or familiar. Negative responses to strange faces increased between 20 and 40 weeks of age, after which, the child responded by smiling. The negative phase was attributed to an increasing ability in infants to discriminate between strangers and familiar people.

H.E. Jones (23, 24) quotes her study on galvanic reflexes in support of maturation. On a comparison of the galvanic reflexes of infants and older children, she stresses that maturation of the neural mechanism conducting impulses either towards or from the viscera plays an important role in the alteration of emotional behaviour. She found that the Galvanic Skin Reflex (G.S.R.) was smaller and less easily roused in younger than in older children. This observation is explained by Jones in terms of the relation that exists between the overt and visceral expression of emotions. As older children tend to inhibit the overt expression, the emotional impulses flow more towards the viscera and increase the intensity of the inner patterns of response. The heightened visceral discharge is indicated by the G.S.R. The development of the neural mechanism concerned determines the covert as well as the overt patterns of response so far as infantile 'emotions' are concerned.

Gesell (10) conducted an interesting experiment on identical twins. He made observations of the emotional behaviour of twins and was satisfied that both agreed to a significant degree in their responses to strange situations, social games, reactions to a mirror image, and gestures of refusing, avoiding, begging, crying etc. Training and practice were given to one twin in certain situations for a period of 46 weeks. At the end, both the experimental and the controlled twin were tested. Both twins exhibited the same forms of behaviour to the same degree of correspondence in all situations used for training the experimental twin. Gesell attributed the developed patterns of behaviour of the controlled twin to maturation.

Goodenough (12) studied the emotional behaviour of a ten-year-old girl. She was deaf and blind from birth. The girl was subjected to different kinds of emotion-provoking stimuli. She exhibited emotions just as a normal child did. She showed the emotions of joy, anger, timidity and so on. Her emotional responses were not handicapped by her physical defects. Goodenough concluded that many of the overt emotional responses were unlearned. Similar studies on blind children have supported maturation as a factor in the development of emotional responses.

Learning

The influence of learning on emotional behaviour may be demonstrated from the studies on conditioned reflex, on imitation, and the effect of direct-instruction upon the modification of behaviour. Pavlov (28) demonstrated that a secondary stimulus could evoke the response natural to a primary stimulus, if both the primary and secondary stimuli are presented in combination a number of times. His dog, which could salivate on the presentation of food, showed the salivation-response to hearing the footsteps of the servant, who generally carried in food at mealtime. He could elicit the salivary reflex upon the ringing of a bell (Secondary Stimulus), if this were sounded before food (Primary Stimulus) was presented. If this experiment is repeated several times the salivary reflex becomes a conditioned reflex to the sound of the bell. He also found that if sounding the bell was not accompanied by the presentation of food a sufficient number of times, the dog ceases to salivate and the conditioned reflex becomes extinct. The reflex is inhibited. These two principles of the conditioning and unconditioning of a reflex were successfully used by Watson in conditioning emotional responses in children.

Watson (36) experimented on a healthy child, eleven months old, who showed no fear to any stimulus except the three primary stimuli, *viz.*, loud sound, loss of support and organic pain. The child was accustomed to play for long periods with a white rat. Once when the child was about to touch the rat, Watson produced a loud sound by striking a metal bar with a steel hammer. The child grew afraid and fell forward. A week later, the rat was produced before the child. The child showed some hesitation in touching the rat. When the rat was brought closer to him, he withdrew his hand though he did not exhibit any marked fear-reactions. Later, the rat was presented before the child five times accompanied by a loud sound. The child showed intense fear. When the rat was shown without the accompanying sound the child shrank back instead of reaching for it. A few days later, the child was presented with a rabbit, a dog, a fur coat. The fear that was conditioned by the rat extended to other furry objects, showing thereby the spread or extension of fear-responses.

Watson has also shown that fear conditioned to an object or situation may be eliminated by a process of reconditioning. The child, whose fear-response was conditioned to a white rat, was shown the animal while he was eating. This was repeated a number of times, after which the child ceased to experience any fear and instead showed signs of pleasure. In the light of the results obtained, he asserted that the principle of conditioning can account for a variety, and complexity of emotional behaviour in human beings.

Several investigations on the lines of Watson's work have been carried out with different results. H.E. Jones experimented on a child of 15 months. When an electrotactual stimulus was applied the child gave a startled reaction. This reaction was conditioned to an electric bell on the lines of Pavlov. The electric bell alone could elicit the startle reaction. When another bell of a different tone-quality was sounded, there was no startled reaction from the child. But to an electrical buzzer, the child showed mild apprehension. He did not exhibit a generalization of the startled response to the bells of different tonal quality.

H.B. English (8) used a black stuffed cat to induce fear-reactions in a child of seven months. The child had a positive response towards the stuffed cat before conditioning. When the child was reaching the toy, her elder sister set up a loud and indignant howl. The child became frightened and withdrew from the toy. She would not touch the toy though offered it several times in the next two hours. English was of the opinion that fear-responses conditioned in the casual environment of the home, were unlike the conditioned reflexes established in a laboratory-situation, and the former were not to be classified under the latter.

Whatever the views of psychologists regarding the type of conditioning, the concept of conditioning has become useful in throwing light upon the complexity of emotional problems.

In early childhood imitation plays an important part in learning many emotional responses. Children learn the responses of their parents in emotional situations, and later imitate them in similar situations. If parents show signs of fear in the presence of a snake, children also exhibit fear-reactions upon seeing a snake. It has often been observed that a child cries on hearing an older brother crying, without knowing why. Adults at home become models for the behaviour of their children. Even older children adopt the same kind of attitude as those whom they regard as their ideals. Stereotypes and other emotional attitudes formed towards out-groups are determined by the reactions of members of in-groups. The prejudices of whites towards coloured, antisemitic feelings and other group differences, as exhibited by adults, are imitated by children.

A FEW SPECIFIC EMOTIONS

Fear

Much of the work on fear-emotion has been done on children. Very few studies have been conducted on the fear of adolescents and extremely few, on adults. The results of the studies on children's fear indicate that maturation and learning play a dominant role in the manifestation of fear-responses. The principle of conditioning, as explained earlier, can account for a large variety of fear responses. Watson's experiments have become classical in this regard. Threats from adults, fanciful stories, parental fears, etc., contribute to the development of fears in children.

Zubeck and Solberg describe three characteristics of fear evoking stimuli (38) for their maximum effectiveness: (1) suddenness, (2) unexpectedness, (3) novelty.

(1) *Suddenness* or *abruptness* is an important characteristic of stimuli which produce fear-reactions. English (8) has demonstrated that noise by itself cannot produce fear, but it is the factor of suddenness that arouses it.

(2) The *unexpectedness* of a stimulus evokes fear. An unexpected leap of a frog causes panic in a child, though he is not actually frightened by it. Even adults can recall many such fear-experiences caused by the unexpected appearance of rats, lizards and similar creatures.

(3) *Novelty* is another characteristic that causes fear-reactions. A child may be afraid of his father in unfamiliar clothes. An infant may show signs of fear of his own nurse, when she is not in uniform. Such incidents in life bear ample testimony to this characteristic of stimulus in producing fear-reactions.

AGE AND CHILDREN'S FEARS

As children grow older, their physical and neural mechanisms develop. Their perceptions become keen and the intellectual abilities sharp. These changes cause variations in the nature of fears and their reactions. The first fears are mostly related to the physical injury and other bodily discomforts. Later, they shift to imaginary and social ones. The most common fears at the age of five are those of dogs, doctors, noises, storms, strange objects, machines and the like. Brooks (5) found the fear of blood, ghosts, death and dead bodies, lightning, dark places and loneliness among children between the ages of six and ten years. Jersild (20,21) found the fear of animals and criminal characters more pronounced among children of five to six years than of those between eleven and twelve years. But both groups showed fear about ghosts, corpses and skeletons.

In 1952 Vedavalli (35) while conducting an investigation, asked 40 boys and 40 girls studying at college level to recall their childhood fears. About 78 different types of fears were reported. The most frequent ones were those pertaining to ghosts, darkness, snakes, beggars, thunder and lightning, thieves, worms and teachers. Wild animals, water, strangers, fire, parents, loud noises and corpses were also found to evoke fear. She found that boys showed a greater tendency to fear than girls.

Nagarathna (27) studied 31 children, aged from ten months to 66 months with a median age of 30 months. The children belonged to the middle classes in Mysore. She followed the Goodenough method in collecting data from the parents who recorded the occurrences of fear, anger, laughter, etc., in their children. She found that the most common fear-producing situations were of animals, insects, loss of balance, unexpected noises, punishments, oddly dressed mendicants and the fear of being left alone.

She also found that with increasing age, fear of loss of balance, unexpected noise, fictitious objects and fear of strangers decrease in frequency. She attributed them to the growth in muscular control and to a better understanding of the harmlessness of the situations. The fear of insects and animals, of punishment, of darkness and of being left alone increases in frequency with advance in age. She reported that boys were more frequently afraid of unexpected noises and darkness than girls.

Rajalakshmi Varma (34) carried out an investigation regarding the objects and situations that arouse fear in children aged eight to ten years. Her sample consisted of 155 primary school children in Madras. Her results indicated that an eight-year-old child had fears about death, supernatural things, losing objects, and possible injury. At the nine-year level, the fears are directed towards school situations, reptiles, fear of losing things and supernatural phenomena. The ten-year old students showed fears about death, supernatural phenomena, losing things, reptiles etc. She found that girls tended to show more fear than boys.

CONTROLLING FEARS

Fears may serve a useful purpose in the animal world. For primitive man, fear had a survival value, but in modern societies fears may not lead to a better adaptation to everyday life. Many of the fears could, and should be done away with, as they lead to emotional tension.

One might think that the best way to deal with fear would be to keep the child completely away from the fear-arousing situations. But this is impractical, as it is not possible to keep children away from fear-arousing situations. Besides, the child will be ill-equipped to face the future problems of life, if he is not allowed to experience corresponding fear-provoking situations.

Most often parents resort to a *verbal appeal* to eliminate fears. They tell stories about the feared object in the hope that the child may become familiar with it. Children are reassured that no harm will come of the feared object. But this technique may not be effective as the discussions are carried out on an abstract level. With its limited vocabulary the child may not derive as much benefit as it would from the actual experience.

Another way of handling fears would be through the method of *disuse.* The feared object is kept away from the child till that period, by which time he would have acquired the necessary skills and ability to cope with the feared situations. *Negative adaptation* has long been used by parents to help children overcome their fears. Suppose the child is afraid of water, the parents encourage the child to play with water and get used to it. The rationale that underlies negative adaptation is that a repetition of the fear object brings about its familiarity so that after some time the child gets used to it. This method is successful if the fear is mild; otherwise, the situation may become aggravated.

The use of *distraction* as a technique in modifying fear consists in drawing the attention of the child to the interesting features of the feared object. The satisfaction derived from this will be associated with the fearful situation, and the strength of fear be reduced. Another way of using this approach is in the development of a few skills which could be used in a feared situation. Learning skills like singing, dancing and even playing stunts may reduce the fear of participation in social functions.

Some parents ridicule children for their fears. They make fun of them in the presence of their associates. This leads the child to repress fears to escape ridicule. But *repression* of fear should be discouraged as it may endanger mental health. Giving full expression to fear may be better as it reduces the intensity of the fear emotion. The method of *social imitation* is a better approach in dealing with children's fear. When a child shows fear towards an object, he should be allowed to observe his friends and neighbouring children play with it. This gives him confidence and helps to eliminate his fear of the object.

Direct conditioning is an effective approach in overcoming fears. The child may be brought, when he is in a pleasant mood, into contact with the feared object. The frequent association of pleasant situations with the feared object reduces the intensity of fear, and familiarity with the object thus established removes fear. Care should, however, be taken to see that no reverse association other than the desired one, takes place while using this method. Many of the fears that children experience could be removed by the discreet use of any of these techniques, depending upon the nature and intensity of the fear emotion expressed. If care is not taken in the earlier stages, some of them may develop into phobias and cause a pathological disturbance of behaviour.

Anger

Of all emotions, anger seems to occur most frequently among children. Any interference with their activities and plans makes them angry. On the basis of her investigations in Minnesota, Goodenough (11) reported that the frequency of anger outbursts was greater when the child was playing either alone or with playmates, while dressing or undressing, at mealtime and when he was in bed. The outbursts lasted longer, when the child was in bed or going to bed, and when the child was having a bath.

Goodenough classified the causal conditions of anger into social relationships, objection to routine physical habits, direct conflict with authority, problems of self-help, physical discomfort or fear, miscellaneous difficulties, restriction of movement and changes in routine. She gives the frequency of anger under each category from less than one year to four years of age and over. Under one year of age, three-fourths of anger-responses belong to social relationship, routine physical habits and physical discomfort. Routine physical habits, direct conflict with authority and social relationships caused three-fourths of anger-outbursts between the ages of one and three, and two-thirds of anger-responses among the children of four to seven years.

Nagarathna (27) found among children in Mysore aged from ten months to 66 months that frustration of play activities, desire for food and sweets, and thwarting of self-expression were the most important causes of anger. As regards the effect of age on these causal factors, she points out that the anger outbursts arising out of frustration in food-seeking and in appeal impulses are more frequent at lower age levels. Anger-responses due to the thwarting of self-assertion, curiosity and display are found most often in higher age groups. According to her, boys express anger more frequently when their self-assertive tendencies are interfered with. Girls show anger more than boys when food-seeking, display and the parental impulses are thwarted.

EXPRESSIONS OF ANGER

Expressions of anger vary with age and training. As children grow, they adopt the socially approved methods of adjustment in provocative situations. Children under two years resort to physical violence while dealing with other children. Their anger response is mostly hitting out or biting. Between two and three years a physical attack may be made meaning to cause injury to another child. After three years, the child uses abusive language in place of physical violence. The kind of language the child uses depends upon his upbringing and social milieu. Sometimes the emotional outburst is so intense that the child loses control and has a temper tantrum.

Temper tantrums last only for a few minutes. During that period, the child exhibits a violent manifestation of anger-responses. Kicking, biting, screaming, scratching and throwing himself on the floor are common characteristics. By resorting to a violent form of anger-outburst, the child feels that he can control the situation. It is generally directed towards that person whom the child thinks responsible for thwarting his demands. Sometimes, the child causes injuries to his own body in a fit of rage. Temper tantrums frequently occur between two and three years. After three years of age there is a decline both in the intensity and freqency of temper tantrums.

HANDLING OF CHILDREN'S ANGER

Children are found to exhibit anger responses in daily life. How to handle their emotional reactions is the concern of those looking after children. A child gets angry because of the tension he experiences, as a result of thwarting and frustration. The tension should be released in some way. One way of dealing with such cases is to distract the child by directing his attention towards something else. When he gets calm, the situation that aroused anger in him may be talked over and the child helped to have a correct view of the situation. This approach is effective with older children. With younger children who are incapable of adequate communication, it is easiest to distract their attention.

As children grow up, they should be taught a problem-solving behaviour in coping with situations that provoke anger. The child should change his behaviour and use socially acceptable ways of getting rid of the hurdles to what he seeks.

Jealousy

Jealousy is not a distinct emotional response. It is often described as a sort of anger directed against a person of whom the child is jealous. The example which is often cited is the arrival of a new baby in the family. The new baby becomes the centre of attention and affection, and the older one feels that he is neglected. He thinks that the younger baby has come in the way of his getting parental affection, and is jealous of him. Jealousy manifests itself most frequently in situations involving love-relationships, especially when the relationship is threatened. The person supposed to be a threat becomes the victim of jealousy.

Jealousy expresses itself in the form of a physical attack during early childhood. The child attacks his rival or the one of whom he is jealous. Older children resort to slandering and ridiculing their rivals. They call them names and use other abusive language as when angry. They may even use physical force and attack the rival. Jealousy expresses itself much the same way as anger does. But the difference is that the former is directed towards the person, who has snatched away the affection of the loved one. Jealousy may cause the child to revert to infantile forms of behaviour. Thumb-sucking, bed-wetting, naughtiness, refusing to eat and such other responses occur when regression takes place.

Jealousy is found at all ages, except during mid-childhood when it is rare. Intense jealousy is as harmful as extreme outbursts of anger. If the child is not helped to overcome jealousy, its continuance is likely to distort his normal development.

While handling jealousy in children, two things should be remembered. Parents should not pamper the child and make him a showpiece at home. Affection must be shown to him, but with proportion. Nothing should be done that may by excess threaten the future happiness of the child. Secondly, the parents must inculcate in their children objectivity towards problems in life by themselves adopting an objective attitude of mind towards children's problems.

Pleasant Emotions

In Bridges' (3) scheme, from delight spring the emotions of joy, elation and affection. Elation and affection appear at about 12 months of age and a year later, joy emerges in an infant's life. These three emotions are called positive as the child does not evade or avoid them. On the contrary he wants them and cherishes them.

JOY

Hurlock (15, 16) points out that 'happiness' or 'delight' is a milder form of joy. Joy is associated at first with the physical well-being of the child. Three months after birth social situations evoke smiles in the child. Fondling brings pleasure a few months later. Definite age trends are noticed in the expressions of joy. In the first few months, joy is expressed in smiling and laughing. When it is intense, the child crows and gurgles and the body movements are increased. By about 18 months, the baby enjoys his activities.

In time the sources of joy become varied and complex. Younger children enjoy playing with toys. They like noisy games. Pre-adolescents have fun in games requiring strength and skill. Adolescents enjoy taking part in many more activities like dancing, music, literature, group games and such other activities that bring them social approbation.

AFFECTION

Affection is an emotional reaction directed towards persons, animals or things. Affection is acquired through pleasant experiences with people or objects. To start with, the child shows affection for those who attend to his needs, who play with him and who give him comfort. His affection is extended to all the people who give him pleasure.

Children express affection in the form of kissing, fondling, hugging, smiling and laughing. Affection in early childhood is directed towards people around them. Besides human beings, animals and toys become the objects of child-affection. Children between three and five years of age show intense affection to those who take part in their activities. At this age, they grow interested in each other's bodies and like to see and touch them. As adolescence approaches, children direct their affection more towards people than towards animals. It narrows down to the members of the family and relatives. Interest centres on members of the same sex. In later adolescence it changes to members of the opposite sex. As regards the demonstration of affection, training influences its expression. The child becomes more inhibited in using the earlier forms of expression and resorts to verbal responses mixed with smiling and physical relaxation.

Parents should give neither too much nor too little affection to their children. In either case, the child may turn the affection inward and become preoccupied with himself. He becomes incapable of extending affection to others. Care should be taken to see that the child mixes freely with other children and adults, with affection. If the child has only one friend as a pivot for his affection, this may lead to jealousy. He wants his friend exclusively for himself, and if other children intrude, he gets angry. The negative emotion, jealousy, distorts his behaviour. Parents must encourage their children to have a wider circle of friends to ensure adequate social adjustment in later life.

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5

SOCIAL DEVELOPMENT OF THE CHILD

L. J. Bhatt

INTRODUCTION

The studies of social development of children have contributed a good deal to our knowledge of human development. There has certainly been good, and extensive research on various aspects of child development; there can be no denying the fact that much of our knowledge of general psychology is based on the knowledge gleaned from several studies in the field of child psychology. One is tempted to change and apply the oft-repeated assertion of social psychologists that social psychology does not differ in any fundamental way from psychology in general, and to assert that the principles derived from the studies of child development are fundamental and basic for a student of social psychology as well as general psychology. To quote Krech and Crutchfield (26) 'the general psychologist as well as the social psychologist is literally forced to study the behaviour of man as a social being. Whether we are studying the behaviour of a man in a laboratory, in the clinic, or in a crowd, whether we are studying his perception of coloured papers, his performance on an intelligence test, or his decision about participating in a lynching, we are studying the behaviour of a man as influenced by his perception of the social world.' Many investigations have led us into the social world of a child and accumulated for us a vast and varied treasurehouse of fundamental knowledge. Some names are outstanding—C. Buhler, S. Isaacs, Murchison, Gesell, Piaget, Freud and later psychoanalysts, Adler and others; and we can get much from them. But here, we will confine ourselves to *the researches that are significant and should be undertaken by us in the Indian context and setting*.

A child has to adjust himself to the social world that he or she inherits; social adjustment is an important aspect of total adjustment and does contribute ultimately to a child's general effectiveness as a good member of the society. It seems to be the destiny of human beings to establish and maintain adequate social relationships and to strive, to seek and to achieve a social status. In this striving, a child comes under the impact of others and several inter-actional situations lead him to acquire important elements of personality. This implies that it is possible to obtain useful material by social psychologists and the general psychologists by studying personality and social relations in child study.

There has been extensive research on social development during childhood and adolescence—but, let us say it with a capital parenthesis, these researches have been done elsewhere and not in India, and are related to a different social context. Nevertheless they are useful as sources of information on method. For example, we will have to examine researches dealing with the psychological relations of people with others and the impact of those relationships upon the growing individual. We will have to remember that the whole field of child study has not been deeply explored in our country; the institutes that are expected to contribute vigorously are new and have still to find their feet. The departments of psychology are most probably in the process of making up their minds as to whether they are going to study animals or men; and the departments of child development are in the process of deciding how to use knowledge about the foreign child to suit observations that they make about the Indian child in their neighbourhood.

The scope of the theme of this chapter can be almost limitless as several types of studies can be included under the heading of social development. Anderson and Anderson (1) have observed that the studies of early differentiations of emotional responses, studies of anger, hostility, aggressiveness, jealousy, security and insecurity, laughter, pleasure, sympathy and sex-behaviour can suitably be included in a chapter on emotional behaviour; still 'practically everything that can be written under emotional development is encompassed within the framework of social development.' In the same way, the studies of inter-action have a place in the discussion of this topic. Studies of learning in childhood will need to be taken into account because social development is inseparable from learning. Thus there is a likelihood of overlapping or a restatement of facts reported by others in the same volume. Bearing this in mind, an attempt is made here to focus attention on some problems that need to be investigated *here* and *now* in our culture, and that may yield in the long run a theoretical structure.

A word of caution. Our investigations on a topic like this have to bear in mind our home life and its social climate—a life with few modern aids such as vacuum-cleaners and electric washers; where it is assumed that a mother has a round of duties between rising in the morning and going to bed at night, cooking, mending, scrubbing, washing, looking after children, a husband and others while operating on a narrow budget. There is also a father, who is not expected to help about the house; he has a special position as a bread-winner and not as one who shares domestic duties; he seems emotionally prepared to achieve a happy married life without being soft. The social climate also includes a neighbourhood—generally a neighbourhood where practically everybody knows everybody else, with a wealth of detail that these people have a son who got on, those a daughter who went wrong or was married and is doing well; that in the next house, there is a woman with an idiot child or an invalid husband; that there are also occasional special excitements like a funeral or a wedding feast, a house on fire or a family row that resounds down the lane. I believe, our children grow in an extremely local life; the house in a suburb or a flat in a modern city does not indicate the stage where the drama of development unfolds itself. Men and women exist in this country in houses open to the street, opposite to one another, just over the cobbles or mud road and shops—not much further. There is a local quality in the day-to-day life which, again, is constantly changing. A new working class is coming up, a middle class that feels the pangs of social change, a wealthier class that is becoming symbolic of an affluent society. Actually, a psychologist, assisted by and armed with knowledge from sociologists, educationists and social anthropologists, is best fitted to investigate problems of social development. Our life may be myopic but it is rich and varied. It has been made rich and varied by our traditions handed to us down the ages; there are 'sanskaras' (rituals) that shape the outlook and, finally, personality. Whatever the modern sophisticated man may say, these have firm roots. People cling to traditions, and traditions lead to beliefs, attitudes and a system of values. We will now examine some investigations that are useful for our purpose.

THEORETICAL CONSIDERATIONS

We have suggested in the preceding paragraphs that the Indian child and its social development need to be studied in an Indian setting, that is to say, that we cannot ignore our socio-economic life-customs, traditions, systems of values etc. The problems of individual and social life, the adjustment of relations between individuals and groups, the adjustment of a child's inner life with forces that may operate in the environment, the ceaseless struggle for a better life, are some of the problems susceptible of investigation by child psychologists. To solve these problems, a method of precise and objective observation must be followed. In another context Prime Minister Nehru stated, 'We must hold to our anchor of precise objective knowledge tested by reason, and even more so by experiment and practice, and always we must beware of losing ourselves in a sea of speculation unconnected with the day-to-day problems of life and the needs of men and women'.

'We are now', says Anderson, (2) 'in a period in which almost everyone is concerned with a theory of child behaviour and seeks to develop hypotheses which can be verified'. To use Bartlett's(7) phrase, child psychologists have to adopt some 'adventurous thinking'; it will be routine rather than creative if everyone is concerned with a theory of child behaviour. What could be adventurous thinking ? Binet's discovery of the mental age, or the use of sampling techniques as developed for polling or Lewin's (27) experiments are examples of 'adventurous thinking' for they made possible tremendous advances in the science of psychology. Topics, taken wholesale from foreign journals, do not represent our needs. First, it seems propitious to take up studies that discover the types and amounts of stimulation needed by the growing child at various periods of development in order to make the most effective use of his resources and to develop a good personality. Second, it is worthwhile to ask in detail questions about the nature of environment in terms of stimulations, content and pattern that facilitate development. Discerning readers will see that these are indeed basic problems.

Let us suppose that there are children exposed to poor (bad) environment, what should be done to repair or compensate for deficiencies in early stimulation ? I am asking this question when parents are returning to their homes with their children in NEFA in Assam, after the gruelling experience of a Chinese invasion. There should be plenty of opportunity for a developmental psychologist to study the mechanism of recovery. To put this more simply, we need knowledge of how stability is re-established and how effectively function re-emerges. Moreover, in a country that is striving to educate the illiterate, several extensive studies of the learning process in both laboratory and life are needed. We also need studies of complex skills, basic studies of stimulation and of learning upon which we can base our practice. Another area that is receiving attention from developmental psychologists is that of studies of creative experience and creativity. Researches on these topics will give us answers as to whether education should stress 'the needs and interests of the child as a person rather than around the needs of society as society.'

Studies of social development are necessary to build up methods of child care and training. 'The social behaviour of a child progresses from very simple manifestations in babyhood to the complicated social relations of later childhood' and suggests 'that the process of social development is a matter of learnning and habit formation'. I assume that parents seek conformity in behaviour and impose inhibitions and restraints with a view to making a child more cooperative. The studies of interests in other children, learning to be co-operative in play, can make a useful contribution to the knowledge of parents.

Pressey and Kulhen (31) have advocated another propitious line of research for developmental psychologists. They believe that the life-span approach is useful because 'it deals with psychological development and change throughout the life-span (not simply in childhood and youth), with emphasis on the fact that change and development go on after the growth years; second, it sees that development in its rapidly changing socio-economic and cultural environment—not merely as a biological phenomenon....Such a treatment is believed to have special value in (1) aiding self-understanding for seeing one's life as a whole, and so planning it, (2) giving a life-span perspective to topics in general psychology which results in long-term interpretations, and (3) making much in applied psychology more useful.' They also agree that the development of an individual's life from early childhood to old age is of central importance to his welfare, effectiveness, happiness and total psychological adjustment. Childhood and adolescence are periods of expanding social life and increasing stability in social relationships. Parents interested in good social development need guidance from psychologists as to what they can and should do to develop social interests and skills. As children begin to mature, they begin to see the social world on socio-cultural, racial, religious and ethnic lines. Sex problems at pubescence also need attention. The expansion of the social world continues during adolescence and into the adult years, until around the age of 50, making the life-span approach of study very vital.

Just as the problem of social development can be studied from the standpoint of learning or adjustment, it can be studied from the standpoint of personality development. A child is not exposed to culture as a whole but to a restricted, family-biased version of a culture. Thus, there is an indirect exposure to culture, depending upon the rearing system that may be obtainable; the first social behaviour occurs in the home, and this initial behaviour in the home can be a matter of great consequence for his future development. A child is likely 'to reflect, in his inter-personal relations with peers and other adults, the social attitudes, expectancies and adjustive techniques that it may have experienced' through his parents. Thus, several studies of parent-child relationships can be recommended. The studies of the sources of ego-development, normative sequences in ego-development, studies of general trends in emotional development, extensive researches on parent-child relationships, the impact of parent attitudes on personality development, and also studies of values and interest will prove helpful in building up correct observations on the psycho-social aspects of personality development.

A REVIEW OF RESEARCH WORK

There is a wide variety of topics selected for study by students of developmental psychology. The major work has come from the United States of

America. The scope of the studies is so great that it becomes difficult to develop a classification of topics under suitable headings. Psychological Abstracts use the following captions under Developmental Psychology—Infancy—Childhood (a) Learning, (b) Abilities, (c) Personality, (d) Parent-child relations; thus the caption mentioning social development is not used. Therefore, casting our net as wide as possible, a brief running account of research work that may stimulate Indian psychologists and educators is given below. The aim here is to illustrate the variety of themes that can be explored to study the social development of children.

1. Charlotte Buhler (9) has traced the development of the social relations which were observed in an experimental play situation between children of the same age through the first 18 months of life. She gave a tentative description of three types of social behaviour as the behaviour of the socially blind, the socially dependent and the socially independent. The same work was carried forward by Maudry and Nekula (28) at the suggestion of Buhler (9) where the social attitude of a given child was consistent or changing from situation to situation. In this experiment, 92 children from six to 25 months were observed in standardized play-situations with a partner not more than three months older or younger, within the given age-limits. The records of observation were analyzed from three points of view: (a) first, reaction in the new situation, (b) inventory of reactions to the partner during the situation, (c) fights and games in the course of the experiment. It is interesting to note the role of the partner in the play situation, that of play-material (six to eight months), obstacles to play-material (9-13 months), and play-material (19-25 months). In another investigation on 'The Development of Social Compliance in Young Children' Crandell, Orleans and others (13) state, 'Using Q-sorts of social behaviour, measures of compliance were obtained on a group of nursery school children and a group of six to eight years old in a day camp', and concluded that 'maternal rewards for compliance were a better predictor of extra-home compliance than maternal punishments for non-compliance.'

2. Faigin (15) has reported a study of social behaviour of young children in Kibbutz. The investigator asked: 'Do children living in groups from birth in Kibbutz learn to interact with each other at an earlier stage? Do they begin to feel themselves as part of a group and develop close relationships with one another earlier than children reared in families?' The sample consisted of 31 children born in Kibbutz; a systematic observation of dependent and aggressive behaviour in terms of predetermined categories was made. It was discovered that (1) there were strong in-group loyalty and identification in all age groups, (2) children tended to control one another's behaviour through group pressure, (3) a tendency existed to confirm to group standards, (4) toilet

training and eating habits are learnt with a minimum of conflict under group standards.

Similar work is reported by A.I. Rabin (32). The topic was "Behaviour Research in Collective Settlements in Israel: Infants and Children under Conditions of 'Intermittent' Mothering in the Kibbutz." This was an investigation of 'ego development and intellectual factors' in infants and children under conditions of lack of 'constancy' or 'continuity' of mothering. There were two experimental groups of 24 infants from five different kibbutzim and 40 children from 6 different kibbutzim; there were two control groups of 20 infants from four Moshav villages, and 40 children from four Moshav villages. The measuring devices used were Vineland Social Maturity Scale and Griffiths Scale for Infants; Goodenough's Draw-a-man; Rorschach Test; Blacky Projective Test; and a sentence completion test. For its sheer ingenuity, this study is included.

3. Wright, Deeble and Ragle (46) have tried to study children's acquaintance with neighbourhood-families in communities differing in size, at the University of Kansas. These investigators feel that developmental psychology has not done a great deal to describe the plain and simple facts of children's naturally occurring life-situations. 'Current theories of personality formation affirm or imply that the clear cognitive structure of the environment gives security feelings and consequent emotional strength and poise.' The subjects were 30 city and 30 town children, ranging in age from six to 11 years and matched in pairs across communities in age, sex, school, grade, social class, number of siblings, and residence history. They accompanied these children one at a time on 'neighbourhood walks', each of which lasted about two hours, with breaks for rest. When they passed a dwelling, the observer asked the child: 'Who lives there?'—and then developed a free conversation. Generally speaking, it was discovered that subjects of both city and town knew many more pets by species or appearance than human neighbours by name; adults were better known in town. The neighbourhood of the city child is a more juvenile kind of habitat than the neighbourhood of the child in town; virtually all the different kinds of acquaintance increase appreciably with age in both communities.

Wright, Deeble and Ragle (40) have worked on the topic 'Measures of the Child's Acquaintance Range outside his Neighbourhood in Communities Differing in Size'. The method of study adopted was an on-the-spot inquiry and analysis of spontaneous running comments by the child. These studies are useful because they give us an insight into the child's community environment in city and town as contributing to a framework of description of individual children's behaviour in communities of differing size. I have seen one more abstracted paper on 'Children's Miniature Constructions of their Communities, its Habitat Models in Communities Differing in Size' by Wright and Wiest (Kansas and California). It is worthwhile to take up similar studies to answer the question : 'What and how many settings and objects, with what attributes, make up the child's community environment in city and town and village?'

4. Children's interests and what they suggest have become a useful line of investigation. "Children's interests are usually defined by the activities they pursue when given some freedom of choice—either verbally or in a 'real life' situation." In one paper Jersild and Tasch (22) have made many illuminating observations to guide potential research workers. The interests of children, according to these authors, are influenced by both general cultural factors and by special opportunities that come their way *e.g.*, due to differences in the learning situation. There are, however, limiting factors like a child's level of maturity, differences in abilities, differences in the availability of time and energy. These need to be studied in our culture. The findings of these two authors support the view that 'interests which a person might have acquired and might now enjoy if he had had the chance to learn them not only include activities of which he is aware but, perhaps, also might include activities which he does not happen to think about.'

5. While all research reports cannot be included, it seems pertinent to point out that quite a large number of studies examine the position and relationships of a child with the other members in a family. Burke (10) has reported an investigation on 'A search for systematic personality differences of the only child in young-adulthood'. For this investigation, the Rorshach Test, MMPI and A Style of Life Questionnaire were used. The authors were not able to prove the hypothesis. Smith (36) has reported 'a comparison of interview and observation measures of mother behaviour.' The purpose was to evaluate the adequacy of the interview as compared with controlled observation of actual behaviour. A basic assumption was that the observed behaviour represented a criterion against which reported behaviour could be validated. The subjects were 30 mothers with children in the Harvard Nursery School. The mothers were first observed for 45 minutes while interacting with children in an observation room, and later interviewed. Faigin (15) and Antonovsky(4) have made a contribution to research in the area of the mother-child relationship. This was an exploratory study testing relationship between child-rearing practices of mothers and behaviour of children just under two years; the sample consisted of nine mothers and their children; method was observation of mother and child in standard play room set-up and later on, structured interview; results indicate that certain learning conditions set up by the mother in child-rearing patterns influence the development of certain behaviour patterns and motivations in child. Fathers have also come under the scrutiny of investigators; for example,

Peterson, Becker and others (30) have reported a study of parental attitudes and child adjustment. They found that attitudes in fathers were as intimately related as attitudes in mothers to the occurrence and form of maladjustive tendencies among children, and therefore, that there was a need to study fathers, as crucial components of the social environmental matrix from which child personality tendencies emerge.

Bandura and Walters (6) have prepared a research report on the study of the influence of child-training practices and family inter-relationships. It is a report on the origin of anti-social behaviour of 26 adolescent boys. Bayley and Schaefer studied the relationships between socio-economic variables and the behaviour of mothers towards young children. In this study, previously developed ratings of maternal behaviour, based on the records of a longitudinal growth study of 56 normal children, have been analyzed according to the socio-economic status of the children's parents. They concluded that there was a tendency for the mothers of higher socio-economic status to be more warm, understanding and accepting, and for those of lower status to be more controlling, irritable and punitive.

6. There is plenty of literature on competitiveness and co-operativeness in different cultures. It is possible that competitive orientation toward social living may be getting transmitted to children. Greenberg (17) says, 'The importance of this human inclination is everywhere acknowledged, and it is everywhere exalted as one of the prime motive powers in the accomplishment of the world's work.' Greenberg (17) has made a useful study of the growth of competitiveness during childhood in Vienna. 'Competition' in this study was understood 'to mean the human tendency which consists of a desire to excel, an impulse to do better than our rivals'. The object of this experiment was to study a competitive situation and to determine : *(a)* whether, in a given situation, competition always exists, *(b)* when, in that situation, the tendency first occurs, *(c)* whether, if present, it exists always in the same degree; *(d)* how it manifests itself, and *(e)* what causes it to vary. Children from the age of two to seven years were included. The study revealed that (1) competition in building blocks is not found in children of all ages, nor in all children of any one age; (2) the growth of the competitive impulse in the use of building stone follows an orderly course as *(a)* no competition, *(b)* some competition, *(c)* competition, *(d)* competition with increased critical judgment; (3) in the use of building stones, no competition was seen at all in children of two years of age. At least 20 per cent of six-year-olds have it well developed. It can be said to make its appearance usually at about the age of four years. Similarly, Gottaschaldt and Frauhauf (16) have investigated the development of co-operative behaviour and found that two-to three-year-olds show no form of co-operative behaviour at all, the three-to four-

year-olds achieve co-operation partly and four-to-six year-old children show the element of adult co-operation.

7. In another interesting investigation on the 'Attitudes and Interests of Pre-Menarcheal and Post-Menarcheal Girls,' Stone and Barker (37) have studied the emerging interest in the opposite sex and related activities. In this study, the subjects were 1000 girls of two large junior high schools of Berkeley, California, who were subjected to the same routine of testing and physical measurements; a woman assistant ascertained whether or not the menarche had been reached. The items of the questionnaire were very carefully selected and analysed; the items can be grouped under headings like (1) heterosexual interests and attitudes, (2) family adjustments, (3) adornment and display of person, (4) games and activities, (5) items concerning fears, worries and anxieties, (6) items about imaginative or secretive activities. Authors have discussed the differences in response and have drawn tentative conclusions. Several investigators have attempted to discover the problems associated with sex: this study is cited as an illustration.

8. It is, difficult to find reports of studies in the field of child-development in general and in the area of social development in particular in Asian countries. This may be because psychology, as a discipline worthy of attention, is a comparatively new subject. We do come across scattered abstracts of the contributions of Japanese teachers to several journals. There is not much available in our country—specifically with reference to the present topic. I will refer here to one or two with which I had a close acquaintance. There may be others.

Kodama (25) has reported a paper on the Psychology and Development of Farm Families in Japan. It is an account of a comparative study of the development and psychology of children of farm families with reference to parental attitudes, child-rearing practices and other family relationships in different areas in Japan. 'The study was intended to elucidate the patterns of child rearing ideas and practices, interpersonal relations between children and parents, of each locality and the developmental pattern of children of each area selected.' Says Prof. Kodama, 'The growth and psychological make-up of a child is the product of his natural environment and his personal-social environment, working upon his biological heredity. It is the end result of all these forces interacting with one other and working upon the child. The present study aimed at grasping the child in his natural, cultural home, social and economic environment, by means of the comparative study of children of families in connection with the child rearing practices in different districts of Japan.'

I would like to mention some investigations which were carried out in the Faculty of Education and Psychology, University of Baroda. Buch (8) has prepared a test of social intelligence which has potentialities for further research and re-adaptation to suit various ages and stages. The author believes that social intelligence is an ability of paramount importance in the life of an individual; it is not limited in its usefulness to a specific area of education or occupation, it actively contributes to success in life. There is scope for the studies in the development of social intelligence. Similarly, Warty (38) made an analysis of the fantasies of children. This investigator prepared a projective test on the lines of Jackson's well-known test. The investigator was able to analyse the projective material to throw much light on the problems of social relationships in an average Indian home. Juneja (23) studied the psychological consequences of social mobility; she observed that there is good mobility of populations, and therefore, that it is fraught with significant consequences of a social and psychological nature.

Singh S. D., Singh K. and Singh Y. (34) have reported a study of 'the Development of Caste Consciousness in Indian Children' from four to 11. These investigators used a questionnaire in order to investigate the earlier stages of caste consciousness in a randomly chosen sample of 672 children of four to ten years of age. The results show earlier and faster development of caste consciousness in boys, in rural children and in upper caste children as compared to girls, urban children and lower caste children respectively. Kanungo (24) in his 'Study of Vocational Choice and Occupational Values' among adolescent students, reports reasons for vocational choice among adolescent males and females in India. Rao and Russell (33) have worked on 'the effects of stress on goal-setting behaviour'. It has been observed that the performance of adolescent boys on a modified form of the Rotter Aspiration Board shows that the level of aspiration varies with conditions of stress. Sinha and Upadyaya (35) have worked on the stereotypes of male and female university students in India toward the different ethnic groups. Similarly, Parikh (29) has rendered yeoman service by an intensive study of child rearing systems of the primitive tribes in the Dangs District of Gujarat State.

This portion of the paper is designed to show that varied studies on the problems connected with social development are being carried out in India. However, it must be acknowledged that this is only a beginning.

9. There has been a fair amount of research on the social development of children with special problems. Charles (12) has worked on the 'Ability and Accomplishment of Persons Earlier Judged Mentally Deficient.' It is an interesting study as it is a follow-up (the mean age of the sample of 151 subjects

was 42 years) where it was discovered that the marriage rate was low but the divorce rate not abnormal. There are several studies related to mentally handicapped and sub-normal children. Tizard has worked on 'the Effects of Different Types of Supervision on the Behaviour of Mentally Defectives in a Sheltered Workshop'. On the other hand, gifted children have also won the attention of research workers. Wilson (39) has worked on special ability test scores of gifted children. Thus, several types of children with problems or exceptional abilities furnish a rich field for investigators.

CONCLUSION

Developmental psychology has contributed much to the general field of psychology. It has its own theoreticians and solid research workers. Outstanding amongst them are Piaget, Buhler, Isaacs, Gesell, Freud and others. There has been extensive research on social development elsewhere, though not much in our country. The topic social development, brings about a certain amount of overlapping, say, for example, from the fields of 'emotional development' and 'learning'.

The best method, in the light of the objectives of this volume, is to examine 'the researches that are significant and could be undertaken by us in Indian context and setting'. Here, we have to remember that our children grow in an extremely local life with its own traditions, beliefs, attitudes, customs and a system of values.

Therefore, there is a strong case for taking up studies in child development in an Indian setting. To do so, we have to use precise methods, so that we do not lose ourselves in a sea of speculation. From a theoreticians's point of view, several objectives and methods currently in vogue are discussed in the second part of this paper.

A critical review was made of the existing available literature on the social development of a child; some were selected as suggestive specimens. The topics that appear to be profitable for study are : the early development of social relations, social attitudes of a child, the social behaviour of young children in different cultures, children's acquaintance with the neighbourhood, children's interests, the systematic studies of personality differences, child-rearing practices and their influence on the social development of a child, sex-problems etc. We have also mentioned some studies carried out in India, and focussed attention on the special problems of gifted or backward or handicapped children, and also on the specialized topics which can be listed under social development.

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6

LANGUAGE DEVELOPMENT IN CHILDREN

Kamala Bhoota

One of the significant marks that set the human species apart from other animals, is the complex mechanism of language. Language involves the substitution of signs and symbols for objects and events. It is a social tool and serves many ends. Most learning, formal and informal, takes place through language. Besides being a means of communication, it is an instrument of thinking and feeling. Research demonstrates that through language the individual can direct and control his behaviour. It is language that enables us to indulge in phantasy and humour and to create myths, art, philosophy and science. It is also through language that we can delude ourselves about our character and motives(3).

The term 'Language Development' is merely an abstraction. As a matter of fact, the child develops as a whole. His language is but one aspect and an expression of his many-sided development. It is also a factor influencing development, for there is a continual interaction in the various processes involved in development.

At the beginning, the baby makes various sounds, from which his speech emerges. His first sound is the 'birth cry', a reflex action, resulting from physiological distress. He continues to signal his distress by crying, whenever he is hungry, thirsty or uncomfortable. This crying, however, cannot be termed 'language'. For, language implies a two-way communicative system in which the sender is aware of the messages he is relaying and the receiver is able to comprehend the messages. Hutt and Gibby (7) point out that such two-way communication is not possible until the individual is aware of a 'me' and 'not me', is aware of something outside to which he directs his communications, and is able to formulate it in some culturally understandable way. The parent may be able to sense the needs of the baby from the nature of his vocalizations, movements and other gestures; but the baby cannot be said to have developed language.

Role of Maturation and Environment

Before the child can learn language, his vocal apparatus must mature and he must learn to associate symbols with objects and experience. Learning these symbols undoubtedly involves maturity of perception as well as the opportunity to hear the spoken word in a setting that fosters the child's sense of security and well-being. Thus, it is maturation as well as environment that determine the language development of the child.

The pattern of vocalizations of an infant seems to run parallel to his physiological growth. Research evidence shows that during the first year this pattern follows a regular sequence irrespective of the culture into which the baby is born (7). The initial sounds made by the baby are reflexive and are related to his breathing and swallowing. At first he does not combine different sounds to express his needs, but as he matures, he begins to use different sound combinations. As a neonate, he can make a few vowel sounds and a few consonant sounds. This is followed by an increasing diversification of vocalizations. At about three months, most vowels and about half the consonant sounds used by adults, are uttered by the baby.

The emergence of various physiological changes enables the baby to increase his repertoire of sounds. For instance, when he begins to chew solid food and exercise his jaws, a great variety of sounds becomes possible. Chewing helps to absorb the sucking pads in the cheeks, thereby changing the shape of the oral cavity. This enables the child to make more sounds. Teething and, later on, a fully erect posture and an improved control of respiratory organs, further facilitate a variety of sounds.

Just as some physiological changes stimulate language development, there may be some that temporarily obstruct it. Around the time when walking begins, speech development is slowed down. This partially explains the first plateau in the growth curve. Another plateau appears at about three years of age. Here the emergence of new skills interferes for a while with the regular development of skills that are in progress (1). Some psychologists feel that during 'plateaus' the integration of previous learning takes place(7).

The development of vocalization and speech are not regulated by maturation alone. The importance of environment is well-illustrated in the wolf children, Kamala and Amala, who grew up with wolves in the jungle of Bengal. In an environment devoid of human contact they could not learn to talk. Environmental factors also influence the rate and subsequent level of language development (9). Infants are responsive to the human voice. So when the mother coos and sings to the baby, he associates pleasure with speech sounds. As the baby is rewarded for making certain sounds, he tends to repeat them more often. For example, when the baby is making random vocalizations, he may happen to say 'Mama', 'Dada'. This vocalization has no meaning for him at first. But parents who have time and appreciation, are often thrilled to hear it and repeat it back to him. The baby gradually learns that people respond to a particular vocalization, and begins to use it purposefully to call his parents' attention. It has been observed that the mother's careful and distinct repetitions of the baby's uttered sounds have a significant effect on the baby's language development. However, it should be noted that until the baby reaches adequate maturity, extra stimulation by the mother will not have any positive effect. Indeed, it may even hamper language development through interference.

Research evidence indicates that the total emotional climate in which the baby is reared can profoundly influence the development of language. It has been established that the children reared under conditions of deprivation show retardation in language development. Studies by Spitz (14), Goldfarb (5) and others have shown that lack of love in the child's life can cripple his language development. It is observed that in homes where verbal skills are valued, children learn to speak earlier and more adequately. These skills are valued much more in the higher socio-economic classes than in the lower ones. McCarthy (13) reports a wealth of data which establishes the relationship between early language development and environmental factors. All this evidence points to the conclusion that maturation sets the time and limits, while the environment defines the extent to which language development proceeds. The sequence in patterns of sounds is governed, at first, by general maturation but subsequently the type of development and level of skill depend upon the kind of learning that occurs.

Language Skills in Infancy and Toddlerdom

Infancy covers the period from birth to 15 months, and toddlerdom extends from 16 months to two-and-a-half years. During these stages, the child's language makes considerable strides. The rate and pattern of growth, however, are not the same for all children. Some remain silent until late toddlerdom, when they suddenly burst into full speech, whereas some start indulging in verbal play even when they are unable to articulate words adequately. Most babies begin to use a few words when they are around a year old. But there are perfectly normal children who wait months longer. Learning to talk seems to be also a matter of temperament or personality with some children. The friendly, outgoing babies seem to feel the urge to talk earlier than quiet children, who, intensely interested in observing what goes on, may not attempt to talk for quite a while (15). It has been observed that retarded children usually talk late; but so do some superior children. Although, eventually language becomes the best indicator of the child's intelligence, it does not provide a reliable measure of intelligence during the early years (17).

As noted earlier, infants make a number of speech sounds. Irwin and his co-workers (8) made a systematic study of the vocalizations produced by infants in a series of longitudinal studies in which same children were examined periodically. During the neonatal period, vowel sounds are more frequent than the consonant sounds, the ratio being 5:1. The relative frequency of these two general types of sounds is found to change rapidly during the first year, and the ratio begins to approach that of adults by the beginning of the second year. By this time, sounds such as 'p', 'b' and 'wh' which were absent during the neonatal period, begin to occur, perhaps owing to the maturation of the lip muscles. Most workers in language development have observed that the infant's initial sounds occur spontaneously, and the sounds that persist having been incorporated in the speaking vocabulary, are due to complex learning factors.

From two months onwards most infants seem to experiment with the vocal mechanism. By four months, most of them have mastered the basic use of the vocal apparatus. They blow bubbles, chuckle, coo, and make various other sounds constantly using the larynx and breath control. This is known as the babble stage of learning. By four months, the child has a command of most of the vowel and a few consonant sounds (2). The baby's sounds stimulate him so that he tends to repeat the ones he vocalizes. For instance, he utters the sound 'Da', hears it, and again says 'Da' in response. In this fashion he makes repetitive sounds like 'Da-da', 'oogle-oogle' and so on. This process is known as the circular reflex. It may be pointed out that the early babblings of babies who are deaf, soon decrease in frequency and disappear altogether.

At the sixth or seventh month the baby can make most of the vowel and consonant sounds and many of the dipthongs and syllables included in the adult speech. By eight months he can master almost all sounds of the adult language (1, 2). By nine months the babble softens into the rhythm of the speech the child hears around him. Actual words, symbolizing things or actions, begin to appear when the child is around eleven or twelve months. Before long he uses these words to communicate. Around thirteen to fifteen months the child indulges in an expressive jargon, often containing some discernible words. The jargon resembles speech but is not intelligible. This flow of gibberish indicates his attempt at communication (17).

As may be observed, even during infancy many children learn to use words. The words used by the child constitute his *active vocabulary*. According to the study made by Smith (2) the child's active vocabulary at ten months consists of one word, at twelve months it is three, and at fifteen it goes up to nineteen. However, the words he can understand, i.e., his *passive vocabulary*, exceeds his active vocabulary at every stage of language development. Even at 16 weeks an infant will turn his head to the sound of human voice, and seems to recognize his mother. By six or seven months he is familiar with a number of situations and objects, names of which he begins to recognize. By a year he has a fairly large passive vocabulary (1, 2).

Research evidence indicates that language reaches its first flowering in most children during toddlerdom. As Stone and Church (17) point out, the acquisition of language becomes a valuable tool to the toddler in his development. By learning to name things, actions and relationships, he seems to acquire a new power over his environment. Language establishes a bond between him and the world around him. It enables him to talk and to think about things and deal with them even when he is away from them.

The toddler makes a varied *use of language.* The first active use of words is usually to *name* people, things and action. He picks up names, such as, dog, cat, baby, etc. He has a great interest in names, especially around 17-24 months of age. Parents stimulate this interest by asking, 'What is that?', and soon the child learns to ask the same question, thereby adding to his active vocabulary. Shirley (2) estimates that around the end of the second year, the child's active vocabulary consists of 300 words. Objects stand out and acquire great significance and reality for the child when he learns to name them. He also acquires words for his aches and pains, and his wants. These labels help him to clarify his own experience, which he can share and communicate to others. The toddler's frequent use of language to express wants is noted by most observers. Around 13 months of age his communication largely involves *commands and requests.* At this stage the child also does a lot of *communicating with himself*, naming things, telling himself what he is doing, or repeating parental commands and prohibitions (17).

Further advance in the development of language is made when, around the end of the second year he uses *narrative language.* Thus, from feeling and action, he proceeds into the new realm of the exchange of facts.

Viewed from the point of view of its *structure*, the toddler's language consists of *one-word sentences* to begin with. For instance, when he says 'Mama', he may mean, 'Mama come here', or 'I feel happy when Mama is here'. Such one-word sentences are accompanied by gestures and movements. These words are usually nouns. However, the verbs or adverbs can also be used in one-word sentences, as when the child says, 'Go', meaning, 'I want to go', or when he says, 'There', meaning 'I want to go there'. Interjections, such as, 'Bye-bye', 'No', are also used by the toddler frequently as one-word sentences. As McCarthy (13) observes, between the ages of 18 and 30 months, the toddler's use of noun-like words drops from about 50 per cent of what he says to about 20 per cent. Verb-like words increase from 15 per cent to around 25 per cent, and other parts of speech show a corresponding rise. As the child's experience grows, gestures supplementing his speech diminish. His one-word sentences give way to two and three-word sentences, which include a subject, a verb, objects, prepositions and conjunctions, main clauses, and subordinate clauses and other grammatical components of the adult speech. By two or two-and-a-half years, many children speak in full sentences. Smith and McCarthy (2) have obtained similar figures for the length of sentences in relation to age. McCarthy found that the mean length of response at eighteen months is 1.2 words, while Smith notes that at two years the child uses 1.7 words on an average in the sentence.

It is difficult to estimate the number of words spoken or understood by the child. During toddlerdom the child's spoken vocabulary grows from 20 to 500 words (13), but the passive vocabulary is even larger. The words that have priority in the child's vocabulary are indicative of his inner life. Stone and Church (17) point out that the toddler learns names for other people before he learns one for himself. This shows his low degree of self-awareness. Some infants say 'Dada' before they say 'Mama', perhaps because the mother is too close to them to be identified as a separate entity. The toddler refers to himself by his first name or as 'baby' or 'me'. It takes him a long time to use the pronoun 'I'. Also, he learns to say 'No' before he can say 'Yes'. He uses the word 'Yes' when he is about two-and-a-half or three years old.

Language during the Pre-school Years

Most workers in child study observe that there is nothing noteworthy about the language development between three and six years except that it attains greater complexity and is used for many ends. During this time the child learns to communicate his complex feeling and motivation to others, and uses language to solve problems which he formerly solved by physical means. Instead of trial and error attempts on a physical plane, the child surveys all possible solutions to the problem in terms of language. He remembers, generalizes and reproduces former experiences through words and applies them in the context of the present situation. Language becomes a means of understanding his environment, of securing further information about the world, of people and events and of acquiring other intellectual skills, such as, reasoning, number concepts, time concepts, etc. Language is influenced by the social environment, and in turn exerts its influence on the environment, thus becoming a part of social living(7).

During this period the active vocabulary increases rapidly. The rate of acquisition is said to be around 500 to 600 words per year (2). However, this will depend on whether the child is in an environment where individuals have vocabularies larger than his own. Even though his intelligence may be high, he will not learn the meaning of words that he never hears or reads. The child's vocabulary increase may cease if he does not hear good speech. There are wide individual differences at every stage in the size of the child's vocabulary. On the whole, pre-school children have been observed to talk a great deal. At three years a child may use as many as 11,000 or 12,000 words in a day, while at four 15,000 words may be spoken in a day(1). The passive vocabulary also increases, so that by three to four years, most children understand the basic vocabulary of their native language.

During the pre-school years the child's pronunciation improves markedly, though the individual differences remain. By the third year this improvement is noticeable, and the infantile forms are gone by the time the child is five or six years old. However, many children may continue to mispronounce words even after they have entered school. Children learn to speak clearly if they can hear adults talk distinctly and unhurriedly. A good model of speech is vital for language development.

The pre-school child's sentence-structure increases in complexity. Up to the age of four-and-a-half years he uses a small proportion of complex and compound sentences. But by five or six years their proportion rises, and every form of sentence-structure appears in the child's speech (4). This tendency to use longer and more complex sentences continues in school years and in maturity. According to Smith (2) the pre-schooler's sentences grow in length until at the age of five years. He uses on an average 4.6 words per sentence. McCarthy (2) corroborates this finding, and observes that at four-and-a-half years the child uses 4.6 words per response.

Now the child uses language for narration more extensively than in toddlerdom. At three years the narrative is much longer than during the previous stage of development. Phantasy and wishful thinking are often mingled with reality in the children's narratives. For instance, three-year old Vijay gave the following story: 'My brother was knocked down by a car and he died. Then we put a bandage on him and he was all right again'. Actually the brother had scratched his knee, just before getting into the car to come to the school in the morning and the mother had bandaged his knee. At four years a child has marked ability to narrate events and tell stories. Many narrate stories that have been read to them or told to them. Around this age, children begin to use language for the expression of complex thought and reasoning. As the child acquires greater skill in language, he is able to express his thinking more and more clearly in speech. One often hears conversation in the nursery school which reveals the complex use of language made by children. Three-and-a-half-year old Radha was greatly upset, as she told others about the death of her friend's grandmother in the building where she lived. Five-year-old Mary responded, 'Why do you feel bad? If she has died, it means that she has gone up to Heaven and Jesus is taking care of her!' Radha replied, 'She has not gone up, and Jesus is not taking care of her. They had put her inside the ground and had put mud on her'.

Sometimes at three, children go through a phase of revelling in the use of bad language. They do not understand what they are saying, but do realize that these words shock adults. A year or so later, children are apt to use 'dirty' words even more. They love to indulge in 'toilet' talk and have a full understanding of its meaning. A wise thing for teachers and parents to do would be neither to be shocked, nor to listen to the 'dirty' talk without comment, but to tell the child firmly that people do not like to listen to such talk, and that he should not talk so (15). Another theme that figures in the conversation of four-year-olds is that of mutilation. 'I'll cut off his head', 'Let us chop off his legs', are remarks that appear frequently in their conversation (17).

At three and four years, children go through the question-asking stage. According to Strang (18) 10 to 15 per cent of the pre-schoolers, conversation consists of questions. In one investigation, it was found that a three-year-old asked 376 questions in a single day while a four-year-old asked 397 questions! (2). Jersild (10) observed that the child loves to explore even from his early infancy and his curiosity assumes many forms; once he has learnt to talk, his curiosity expresses itself through a vast number of questions. The questions raised by children vary as their abilities and interests undergo a change. Thus, when a child is in the 'naming stage', he is likely to ask many 'what' questions in his attempt to acquire names of objects and to learn about them. A child may go through a period when he asks, 'Who is that'? for every person that goes by. Such questions are more frequent in toddlerdom than during the pre-school period, during which the 'why' questions seem to predominate. The 'why' questions ask for a clarification of relationships, or of reasons for a certain occurrence. The child's questions may serve many motives other than curiosity. Sometimes the questions are asked for establishing social contacts or receiving attention or gaining reassurance, solace or help. Some questions spring from worry, fear or uneasiness, as for instance, when a child points to a stuffed tiger and says, 'Does he bite?'. Children often repeat the question even after it has been answered. Such repetitions may be for purposes of getting attention, but it may also indicate that the child is puzzled or disturbed. Coan, (10) who had done research on children's questions, notes that the technique of turning a question back upon a child as a means of getting him to think things out for himself, does not work well with some children, for the children would proceed to address the same question to others. Also, after having questions thrown back at them, they tended to ask fewer questions.

Children's questions should be answered with simplicity and honesty, and in such a way that their urge to know and understand is preserved. By answering their questions without *ennui* the adults can help them develop their intelligence and creativity. In trying to answer the child's questions it is necessary to understand its meaning. Sometimes the meaning of the question is not clear. It is important to answer the question that the child has in mind. Many questions raised by young children are difficult to answer.

The most perplexing questions are those that concern God, death and sex. Whitman (19) observes that when we tell our children about God we should be building a foundation for their future belief in God, so that as they grow up they should discard as little as possible of all that we have taught them. For this reason we should not introduce God as a reason or cause or purpose of everything for which we cannot find a simple, naturalistic explanation. 'God made beautiful things', 'He made the sky', are not satisfactory statements, for, as the child grows and learns about physical causation and phenomena, he may reject his belief in God. Likewise, God should not be introduced as a benevolent benefactor who gives everything one asks for. We may explain that God has endowed us with intelligence and we should ask Him to help us use it for solving our problems. Even a little child can be taught that prayer is not only asking, but talking to God to find out what He wants us to do, and that prayer is for asking God to lead one in the direction of what is good.

Death is another idea which is difficult for the pre-school child to grasp. Children between three and five years do not think of death as final. They tend to interpret it as 'absence' for a longer or shorter time. Only when death has severed a bond that is dear to them, do they understand its meaning (16). Questions regarding death are difficult to answer at the pre-school level, also because of the peculiar sensitivity of the child. Spock (16) points out that a three-or four-year-old is at a stage of emotional development when he applies everything to himself, whether it is pleasant or unpleasant. Hence when death is mentioned he reacts as though his own death is being discussed. Since he dreads separation from his parents and has a keen desire to live and be with his father and mother, mention of death may perturb him greatly. However, this is no cause for avoiding answers regarding death. Spock says that by four or five years most children make some kind of adjustment to the idea of death, partly by suppression and partly by denial. The child's play also helps him to relieve his anxiety. It may be observed that one should not liken death to sleep; it is better to explain that in death there is cessation of breathing, feeling and moving. One's tone and general attitude while giving the explanation are very important. The adult who dreads death will not find it easy to present it philosophically to the child.

A typical question regarding sex is, 'Where did the baby come from?' Such questions deserve an honest and a simple answer. An answer such as, 'The baby grew from a tiny egg in a bag in the mother's tummy', usually satisfies the child's initial curiosity. Some children's books provide excellent ideas regarding answers to children's questions about sex (12). Here, too, the attitudes that we pass on to the children are more important than the amount of information given. Spock (15) has very valuable suggestions regarding sex education.

Bilingualism

Since the linguistic controversy is raging in our country, and since ours is a multi-lingual country, the findings regarding bilingualism are of special interest to us. Most psychologists feel that bilingualism has a retarding influence on the language of the child. Landreth (11) cites the study made by Smith of thirty bilingual children aged 37-77 months (Chinese and English) and found that in either of the languages, the bilingual group had below-average vocabulary as compared with monolingual children. Also, when vocabularies in two languages were added, the combined vocabularies of the average bilingual child did not surpass the average vocabulary of children who knew only one language. McCarthy (13) also reports a study by Smith of the language development of eight children in the same family who had varied experiences with English and Chinese. On the basis of this study, Smith concluded that it is probably better for young bilingual children to receive their two languages from quite separate sources; that is, each adult must use the same language consistently. She observed, too, that a change from monolingual to a bilingual environment has a more serious effect on the child's language than a change from bilingual to monolingual environment. According to her, such changes are more difficult for infants, 12 to 18 months of age, than for children who have acquired greater facility in the use of speech. It does not seem to delay the first use of words, but does seem to be a handicap at a later age.

Another very comprehensive study by Smith (13) was made on 1,000 children of varying racial background and varying amounts of bilingualism in Hawaii. She found that in general these children preferred to use English.

The bilingual children showed a marked retardation in the use of the English language. The more bilingual groups were observed to use more non-verbal sentences and shorter sentences than children in a less polylingual environment. They are found to use more exclamatory and fewer interrogative sentences, and to use compound and complex sentences much less frequently. The bilingual groups also showed retardation in the use of connectives and pronouns. The study shows that when a language is disappearing in competition with a new language, nouns and interjections persist for the longest time. The words that are related to the intimate aspects of family life and to eating are the last to be abandoned. In general, Smith found that the children of Hawaii from bilingual homes are so seriously retarded in language development, that they are at about the level of three-year-old children from a less polylingual environment at the time of school entrance. McCarthy notes that most of these studies on bilingualism are obscured by the factor of socio-economic status, since most bilingual children of the type included in the research either came from highly cultured homes of the upper social levels where the language is being deliberately preserved for cultural reasons, or they come from the lower socio-economic levels where the parents have not been sufficiently intellectual to acquire the second language.

There is great need for research on bilingualism in India. We need to know what happens to the child's language development when he is exposed to two Indian languages, and when he is exposed to one Indian language and the English language.

Factors Influencing Language Development

Hurlock (6) cites evidence to show that physical condition has an important influence on the development of language. Severe and prolonged illness during the first two years can retard the development of speech. Children who are hard of hearing are also unable to develop speech at a normal rate. Retardation in speech calls for an examination of the child's hearing and of his vocal apparatus. Intelligence is said to be another factor that determines language development. Studies show that on the whole, children of superior intelligence talk early and are advanced in every phase of language development. But as McCarthy (13) points out, we do not know whether the differences in intellectual ability are responsible for the differences in linguistic development, or whether the differences in language development account for the intellectual differences which are measurable with verbal intelligence tests.

There is considerable evidence in the literature to show that there is a marked relationship between the socio-economic status of the family and the child's linguistic development (13). Children of higher socio-economic groups are more advanced in language than those of lower economic groups. Social contacts and relationships of the child have an important influence on speech development. Children in orphanages are slow in this area of development whatever their intelligence may be. This slowness is attributed to general retardation, which results from lack of close personal relationship with a mother or a mother-substitute; lack of love is damaging to growth, more especially to the growth of language (6).

McCarthy (13) cites research evidence which indicates that children who associate with adults show greater linguistic acceleration than those who associate with other children. It is found that the only child is much superior to children with siblings in every phase of linguistic achievement; their linguistic superiority seems to be out of proportion to what would be expected on the basis of their age, sex, and socio-economic status alone. The reason for this advancement seems to be that these children have greater association with adults and greater opportunity for practice in the use of language under optimum conditions. It is also found that twins and triplets are retarded in speech development as compared with singletons. Psychologists note that if the parents shower excessive attention on the child and are over-anxious about his speech or fuss over every word he utters, the child may become self-conscious and refuse to speak. In some instances, children are waited on by relatives and servants; the children's needs are fulfilled before they are expressed. This may take away the incentive to speak, causing retardation (1, 2).

Several investigators have reported that travel and events which provide first hand experiences to the child are accompanied or followed by increases in vocabulary (13). Numerous studies also report that girls are superior to boys at all ages in their language development (1, 2, 6, 13, 18).

Some types of play are conducive to language development. In a very interesting study by Van Alstyne (13), it was found that over half the time, children in nursery schools did not talk to other children while working with play materials. Certain materials stimulated more conversation than others. Doll-play, blocks, crayons and clay ranked high for the amount of time that their use was accompanied by conversation, whereas painting, scissors and books were low in conversation value.

Need for Research in India

As may be observed from the foregoing discussion, a wealth of research findings is available on the various aspects of language development of children in other countries. These studies have significant implications for the upbringing and education of children in general. However, there is great need for research on Indian children. For instance, investigation should be made to find out whether in India girls are more advanced than boys in language development.

Since boys are more desired and better looked after than girls, one wonders what sex differences would be manifested in regard to language development.

Again, the relationship between socio-economic status and language can be studied in the Indian setting. Many children of the upper classes spend a great deal of time with servants; the effect of this on their language development would be worth investigating. The need for the study of bilingualism has already been indicated in a previous section. Finally, there should be work done on the vocabularies and the speech of Indian children at various age levels.

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7

THE CHILD AND HIS PLAY

Kalyan Kumar Das Gupta

PLAY: ITS DEFINITION AND CRITERIA

Every normal child spends much of his or her time in play. It provides him or her with the most dynamic experiences and opportunities for learning; it contributes to the all-round development of the child. Yet the meaning of the term 'play' is not agreed upon by all. The Concise Oxford Dictionary gives the following definition of play as a verb: 'Move about in lively or capricious manner.' But different philosophers and psychologists have propounded different theories of play, provided different definitions for the word 'play' in terms of various criteria, thus only proving that though the fact that children do and need to play is self-evident, the phenomenon itself is not so easy to understand.

Historically, the earliest attempt to define play was to differentiate it from work. Early writers thought that while work is goal-directed, play is aimless and useless. Many parents even today think work and play are entirely different. Their ideas in many cases influence the children's conception of play as well. Cousinet (21) reports that children often distinguish between work and play by recognizing work as a serious activity like class work or helping in the domestic duty, while play is everything else; brighter children even go further by emphasizing that work is a useful activity, while play is useless. But psychologists today are inclined to think that work and play are not two different activities. They overlap so much, that at times it becomes difficult even to differentiate between them. In the words of Bradley (14), 'it is really impossible to maintain a psychological antithesis between play and work.' Actually, it is the individual's attitude of mind that turns any experience into either work or play for him. Moreover, play is not always aimless. P. Souriau in his *Esthetique du movement* has shown clearly that play is also goal-oriented, since the player in all the games is certainly concerned with the result of his activity (Piaget, 66).

Another attempt to define play was that in contrast to work and other types of activity, play is spontaneous, satisfying and pleasurable. 'Play is what we do when we are free to do what we will'(38). But this again is misleading. Many of the primitive intellectual pursuits of young children, not to speak of many superior intellectual scientific investigations of adults may be equally spontaneous. There are many types of work which strictly may have no ulterior end other than pleasure and satisfaction; as, for example, the activity of eating. Yet we would hesitate to call them play. Again, it is not the activity which is so important as the attitude of mind one has towards it.

Freudian psychologists have attempted to characterize play as activities freed from conflicts. Though it is true that play and conflicts are foreign to each other, it has been pointed out rightly by Piaget (66) that it is only a part of the whole picture. No doubt in children's play 'the conflicts are transposed in such a way that the ego is revenged, either by supression of the problem or by giving it an acceptable solution, but it is because of the fact that the ego dominates the whole universe in play so that it is freed from conflicts'. Moreover, any activity which is free from conflict is not play. With a child who is only too eager to go to school, the activity of going to the school involves no conflict; still we do not call the activity play.

Curti (22) suggests that the criterion which characterizes play is over-motivation. The child when he eats is not playing but when he is over-motivated with the food and starts cutting his food in squares or circles, or when he starts taking spoonfuls for others, is taking recourse to play. This again contains element of truth, but not the whole truth. Motivation on a high level is surely an important criterion of play. But it can be pointed out that it might well be satiation and not over-motivation which may cause the child to start playing with his food. Moreover, it is not true that all behaviour which has successive polyvalent incentives to over-motivate the agent can be termed play.

The definition of play as suggested by Valentine (75, 76), however, seems to be acceptable in the light of modern thought. He suggests that play is 'any activity which is carried out entirely for its own sake'. Thus, this definition seems to blend between the apparently contradictory concepts of play and work on the one hand; and on the other it also takes into account all those criteria of play, namely, satisfying, pleasurable, free from conflict and motivation, mentioned above. It also leaves scope for viewing play as a developmental process. For, though it describes play as activity as an end in itself, it does not rule out the possibility that play may be directed towards an end which itself forms part of the play interest. As such, whenever the child tends to play with the development of any innate capacity or impulse to satisfy that impulse, the pleasure gained through its successful performance will normally lead him to its playful repetition, thus helping the development of the specific capacity.

Theories of Play

The reason for all these differences in defining what is play is obvious. Different philosophers and psychologists have tried to view the phenomenon from different angles, and have propounded theories of their own. It is not necessary here to recount all of them in detail, but an attempt may be made to summarize the most important ones.

Here, again, the earliest one is that play is an expression of superfluous energy. It is an aimless pursuit where the exuberant strength and energy, both physical and psychological which is not needed for self-maintenance or for growth, finds an outlet for pleasurable expenditure. This theory is commonly associated with the names of Herbert Spencer and Schiller. But it has been pointed out correctly that the idea existed long before the days of Spencer and Schiller, and neither of them used this explanation as the basis of their theories on play (5). Apart from that, the theory itself is not tenable. Children are found to carry on with their play even when superfluous energy seems to have been completely exhausted; even sick children, who seem not to have even the energy so needed for their biological existence, do often take recourse to continuous play. The theory also does not explain the developmental sequence of play, that is, why the pattern of play changes with the child's maturity, nor does it take into account the question of individual differences, that is, why play takes different forms with different children.

On the contrary, play may be a means by which one can gain at his disposal new energy in which the organism may be lacking. A tired child back from the school may be refreshed from a game with his classmates or friends. Actually, this fact led Lazarus and Stheinthal to formulate what is known as the 'recreation theory of play.' According to them, play uses the energy of the fresh tracts of the nervous system, and thus gives the exhausted ones time and scope to recover their lost energy through anabolism.

McDougall's viewpoint is akin to this recreation theory. According to him 'play is determined by the premature ripening of instincts' (54). He explains that whenever an instinct, which will be so needed in the mature life of any individual, makes a premature appearance, it is bound to be manifested in playful activities of the organism involving that instinct. He elaborates his view elsewhere (Report of the British Association, 1908), where he states that the energy needed for a specific type of work may not be drawn completely or directly from the appropriate immature impulse, and, as such, that work may be completed only by supplementing energy drawn from other sources. It is in this process that play manifestations take place. But neither his, nor Lazarus and Stheinthal's viewpoint explains why play takes such varied forms. Buhler (17) adds one more objection, when he points out that children may play all day long without wanting to rest from it or without having done any other work.

The idea propounded by Karl Groos on play is of great significance. In all the theories mentioned above, play is considered as a pseudoactivity without any functional significance: it is either a drain for superfluous energy or it is merely relaxation. It is this wrong premise, as Buhler (16) points out, that has made them inadequate. For the maintenance of the organism's physical as well as psychological balance, play, like any other activity, constitutes a vital process. It was Malebranche, who first took note of it. But it was Groos who first formulated and defended the theory of the biological utility of play. According to him (36, 37), play is anticipatory, it is 'pre-exercise'. He believes that the spring of human activities, the instincts, appear in their own time and require preparation; this preparation manifests itself in what we call play. The little kitten hunts a ball as he will later hunt a mouse; the little girl who so devotedly plays with the doll is performing an anticipatory function of her adult life, namely, how to care for the baby. The animals stop playing as soon as they become mature, or in the words of Groos, 'animals are young so long as it is necessary for them to play.' The adult activities of animals are few; as such their play forms are also few and stereotyped. But, adult activities of human beings are so varied and undetermined that human children take recourse to all kinds of movements, and later to forms of play which require them to fancy themselves in varied roles of adult life. Here, suggests Groos, is the explanation of the incessant 'make-believe', which characterizes the childhood play. But, according to modern psychologists, this viewpoint of Groos also does not hold good. There is no doubt that the child learns much through play, but it is neither an instinctive preparation, nor is it a conscious or unconscious attempt to learn something. Moreover, though the theory, in a genetic sense, can explain the origin of play, it does not give explanations for all play activities, e.g., playful messing about and the like, which are not a preparation for future life.

Stanely Hall (39) tried to explain such phenomena by emphasizing that the child through his play, lives over again the racial experiences. The three main points in his theory are: play-forms follow each other at relatively constant age-stages; the forms and contents correspond to activities of our ancestors as they have followed one another in the course of human evolution; and children play so as to get rid of these residue and the species may move towards higher stages. This theory explains some play activities, namely, those concerned with motor activity like dancing and outdoor games, well, but later studies (49) have shown that specific play-contents and play-interests do not characterize definite ages.

Apart from these classical theories of surplus energy, preparation-for-life, and recapitulation, there are many other theories of play. Freud (27) thinks that in play, there is what he calls, 'repetition-compulsion'; it is cathartic in nature, and its biological function is to enable the child to reduce to manageable intensity the influences of those stimuli that assault him from without. Carr, Reamey and Robinson also see in play a cathartic function that not only helps the organism to eliminate the disturbing and dangerous tendencies, but also makes them socially acceptable through the adjustment mechanisms of canalisation and sublimation (Piaget, 66).

Patrick (63) suggests that play may be best described as vehicles for relaxation. With the advance of modern civilization, our life has become more and more complicated, and it throws upon us a great amount of strain, so that we get quickly fatigued. From time to time, therefore, organisms try to seek relief by having recourse to activities that are less complex, and involve the use of racially older and firmly established elements in their disposition. The theory, though it explains why both children and adults play, and also emphasizes the need for change of activity and relaxation, is not altogether sound, because there is no proof as yet that there are certain established elements at our disposal that are racially inherited.

According to Piaget (66), however, 'play is primarily a mere functional or reproductive assimilation'. Children learn to grasp, throw, swing, etc., which involve primarily an effort of accommodation to new situations. Sooner or later, they feel the pleasure in doing so and repeat the behaviour for the mere joy of mastering it. Thus, assimilation subordinates accommodation and the activity becomes play. One of the important attributes of such assimilation for its own sake is distortion. This takes place as soon as it is dissociated from immediate accommodation. That, according to Piaget, accounts for the element of make-believe in children's play. This theory again, though it explains much in children's play, cannot be accepted without reservation, because pleasure is not always a criterion in play. Valentine (76) reports his child (aged 3 : 2), who asked him again and again to play at 'being a lion' and chase him, even when the game had just ended in screams and tears.

It is reasonable to suggest here that all these theories have something to contribute to the explanation of play, but are inadequate to explain the phenomenon as a whole. Thus, while Hall's view is most helpful in plays like dancing and skipping, which involve motor activities, Groos' view explains better play involving intellect. Again, in recreative play there are phenomena as described by McDougall or by Patrick. Valentine's example quoted above may be best accounted for from the viewpoint of Freud. In fact, a full understanding of all that play means to human beings is not possible if all the above facts are not considered.

Development of Play

Whatever the differences that exist among the psychologists as regards the definition or the theoretical explanations of play, it is agreed upon by all today that play is an essential part of the child's life. However, the time at which play behaviour is first noticed in a child, or the kind that it is in the earliest years, or how play activities of young children differ from those of older children—these questions have not yet been fully answered. In recent years a series of careful researches and investigations based on observation, questionnaire and check-lists have been attempted to seek answers to them. Though they have been successful only in eliciting partial answers, it would be appropriate at this stage to have a brief resume of their contents. This will give us an idea of play activities of children in their maturational sequence.

Gesell and Ilg(33) point out that even a young infant is ceaselessly active during his waking hours in different forms of play. 'He practises all his budding abilities in the four major fields of human behaviour, namely, motor, adaptive, language and personal-social behaviour. He flings his arms and flexes his fisted hands (adaptive); he coos and chuckles (language); he vocalizes on his mother's approach (personal-social)'. But all are not ready to accept this view that these are the rudiments of what we can call play. They seem to be just spontaneous movements which are caused partly due to processes taking place in the central nervous system and partly due to the reaction towards different stimuli of the environment. There is no indication of a conscious tendency to reproduce activities which the infant finds pleasant and, as such, desires to repeat. Of course, Dearborn (23) reports that his daughter, even at the age of two-and-a-half years voluntarily shook her rattle when spasmodic movements had sounded it. Valentine (76) reports such a form of activity, as for example, repeated grasping of an object, to be noted only at four months. In any event, it is undoubtedly difficult to say at what stage the spontaneous activities start to have in them an element of repetition due to pleasurable experience.

From the age of four months onwards, children, it is agreed, have been found to attempt to handle any objects in their immediate environment, including parts of their own body, fingers, toes, ears, etc. Valentine (76) reports that about the same time also begins the splashing of bath water. The present author, of course, noted grasping of objects and splashing of bath water in his child at an even earlier age. She tried to grasp things in the 11th week, while she splashed bath water when she was only nine weeks old. This, however, corroborates the view of Buhler (15) that objects are included in child's play even from his third month.

From the sixth month onwards children are found to respond to playful advances, pull hair, explore features, or grab noses of the people they know.

At this stage, as the sensory-motor coordination and understanding develop, simple forms of object manipulation become more complex and goal-oriented. Fenton (25) reports, 'Seventh month: His play now began to take more the form of manipulating things in the environment.... From this period on his play is merely a record of his progressive acquaintance with his environment. The description of his play is virtually an account of the development of his motor coordinations'.

Between eight and ten months, the child can grasp objects with both hands and likes to play by knocking one against the other. At about ten months, the child starts throwing objects. Pikunas and Albrecht (67) suggest that at this level the child 'makes the important observation that the objects fall down and produce noise. For some time he may eagerly enjoy this discovery by letting the toys, spoon, and food fall'. Freud (27), however, thinks that this throwing away play is a symbolic act of sending the mother away. He tells us of a boy aged one and a half years, who used to throw his toy (a wooden reel with a piece of string wound round it) into the corner of the room or under the bed, and then draw it by the string again with an expression of gratification. 'The meaning of the game', he writes, 'was not far to seek. It was connected with the child's remarkable cultural achievement—the foregoing of the satisfaction of an instinct—as the result of which he could let his mother go away without making fuss. He made it right with himself, so to speak, by dramatizing the same disappearance and return with the objects he had at hand'.

From ten months onward children start imitating the movements of adults, like shaking the head, turning away, repeating simple sounds etc., and these constitute a large part of their play activities. Eagerness to manipulate external objects becomes more pronounced at this stage. During this time the child starts playing with his own mirror image. Gesell and Ames(31) report that the child not only looks at the image, but leans forward, kisses it or pats it in playful mood. The present author noted this behaviour in his daughter even in the 17th week.

So far, the children's play has been essentially non-social. During the period of late infancy the growing desire for autonomy and increased self-expressiveness manifests itself in parallel play, where the child plays near others but not with them. In initiating social contacts, physical means are first employed, then objects and finally speech (10). In reporting an interesting experimental study of social relations between the first and second years of life, Maudry and Nekula (52) observe that between six and eight months of age the child regards playmates as play materials; from nine to 13 months, he is more interested in play materials; the period from 14 to 18 months marks a transition and from 19 months onwards a friendly attitude towards playmates is characteristic. Alstyne (2) also reports that about 90 per cent of the two-year-old nursery children observed by her were found to play by themselves. At this stage, however, the children start playing with others, but that is only when they are ready to contribute the major share of cooperation. As adults tend to be more co-operative, these co-operative games at this stage are played by the children more with adults than with their fellow children. From this stage onward, social play becomes increasingly predominant; children swarm together and with increased language-ability shout and vocalize their shared feelings. More and more, they start cooperating with each other in those play activities, which Stone and Church have rightly described as 'associative play' (72). Mussen and Conger (60) report that with advance in age, children spend more time in associative, rather than in individual play. Gesell and Ilg (32) also report that from the third year children prefer to play in groups. Strang (73), however, points out that even at the age of five, children have been observed to spend one-third to one-half of their time in nursery school in individual play. But that may be due to individual differences, due to varying personal, home and cultural standards.

The stage of early childhood is characterized by a general tendency to balance plays demanding strenuous physical activities with the more passive play, marked by creative endeavours and dramatizations owing to increased ability of imagination. In imitating others, various make-believe situations are produced with dolls, clay, paints, animals, household objects, etc. At this stage, children start playing with imaginative companions. Ames and Learned (4) report that at least 21 per cent of the 210 children involved in a Yale University investigation were found to have some sort of imaginary companions. They (i.e., the companions) seem to persist as long as four-and-a-half, but some may continue to have such companions secretly up to ten years of age. The authors of that study felt this to be a part of normal development, though some put it down to the child's loneliness.

Active play like running, dancing, playing ball, tricycling, etc., and constructive play with simple mechanical devices, such as a hammer, knife, scissors, mechano, etc., mark the play-stage of middle childhood. Children also enjoy imitating adults and drawing, painting, etc., as fine self-expressive activities. Many also start collecting coins, coupons, marbles, stamps, etc. These collecting hobbies may at first be casual, but later assume increasing importance in the life of children. Jayne (42) reports that school juniors engage in hobbies more than in any other form of activity during their leisure time. Boynton (13) in reporting an extensive survey of children's hobbies also states, that most children of this age have one or other type of collection-hobby, and that there is a marked correlation between a child's intelligence and the hobby he pursues. All these play activities seem to continue until puberty.

This is corroborated by the research investigation of Lehman and Witty(49). Using a check-list technique, they found that children of the age-group eight-and-a-half to ten-and-a-half engaged themselves spontaneously in the following activities during the week preceding the date of the investigation:

1. Activities involving pleasurable body movements;
2. Activities involving hiding and finding;
3. Activities involving the imitation of adults;
4. Activities involving a relatively high degree of skill;
5. Activities involving efforts at construction;
6. Activities involving sense organ stimulation;
7. Tag games;
8. Singing games and ring games (mainly for girls).

They also found that children belonging to the upper age levels enjoyed the same activities except:

1. Activities involving hiding and finding;
2. Activities involving imitation of adults;
3. Tag games;
4. Singing games and ring games.

Another play-characteristic that manifests itself from five onward, also pervades this period; competition begins, and children like to excel one another. Schwendener(69) reports that fourth grade children enjoy competitive play most, in addition to general body activity and social games.

Types of Play

From the foregoing analysis, it is evident that a child's play is largely dependent upon his age. Each age level is found to have its own characteristic play-pattern. There may be variations based on individual differences (some authors suggest that there may be differences due to sex as well, but Merry and Merry(55) seem to be right in stating that generally, there is not much difference between the sexes in play until after the age of eight). Gesell and Ilg(33) point out that even 'children of high intelligence quotient, nevertheless tend to remain true to their chronological age in many of their spontaneous play interests'. This, assert the authors, 'itself testifies to the basic significance of play in the dynamics of development'. Buhler(16), Hurlock(40) and others have attempted to classify all these play forms into several types, namely, function play or free spontaneous play, representational play or make-believe play, and construction play.

Of these, the earliest is free play or function play. The child plays when he likes and stops when he wishes. Play is mostly exploratory and loses its popularity late in childhood. However, in the sense of the enjoyment of purposeless functioning, it persists throughout life in all non-sportive play manifestations.

Make-believe play or representational play starts usually at about the ages of one-and-a-half and two years(43). There are, however, instances that even at the age of 11 months, children start make-believe play(16). Elaborate studies of such make-believe play done by Markey(51) reveal that it follows a definite pattern of development. Children below three years showed interest in personification, in make-believe use of materials and in make-believe situations. After three years the make-believe use of materials becomes more pronounced. At this stage, they also indulge in make-believe plays, which include domestic situations, buying and selling, activities connected with transportation, punishing, killing and dying, and playing the part of legendary persons (59). Why children have recourse to make-believe play, is again a question to which a single answer cannot be given. According to some(48), it is a means of fulfilment of unfulfilled wishes, and a way to remove or overcome thwarting conditions, while Peller(64) thinks such play is children's means of identification with one whom they love or adore. Winch(79), however, suggests that as the distinction of reality and fancy is not ready-made for a child, he has to make it through gradual and often painful experiences, and thus 'his faculty of making-believe may be due not to the transforming power of imagination, but to ignorance and a sheer inability to see the world around him as it really is'.

From five onwards children start with constructive plays consciously. Vernon(77) reports that children differ from one another to a great extent in such constructive plays. Buhler(15) assigns the following criteria to constructive play:

'1. The child contemplates the product of his activity;
2. While the product may at first be an accidental result of manipulation, it becomes thereafter an objective of planned handling of material;
3. The child evaluates his product........as something of which he is proud;
4. The child becomes interested in materials and his watchful attention shifts......to the observation of the effects he can produce in materials;

5. The child presents, in constructing ....problems and solutions of a technical, intellectual or emotional nature.'

As such, she asserts, such constructive plays are helpful to children both in developing his creative abilities as well as his moral maturity for work. Gesell (30) states that by five children become self-conscious about their constructive work.

Hurlock(40) refers to certain other types of play as well, in which the players are 'more or less in the role of a passive participant'. These constitute amusement from watching others, amusement from reading, amusement from movies, radio and television.

Play Materials for Children

Just as play is an essential of childhood, so also, play materials are essential tools of play. Several researches have pointed out the need to arrange for correct play materials for the healthy development of the child. Isaacs (41) has justly reminded us that the things we give to our children should be so chosen as to meet their needs, and not because they amuse our own idle moments. Buhler (15) also points out the importance of giving the right toys to the children at the right time. She has shown how definite harm can be caused by giving children toys which their elders are going to use. In such cases immaturity in their manipulation may cause damage or breakage, which in its turn may lead to frustration and finally, cause maladjustment to the child's material environment.

Bott (11) in her study with nursery school children found that little children are indiscriminate in the choice of toys. Pattern toys like beads, pegboard, wooden dolls, etc., are used by younger children only as play possibilities, while older children can use them for specific purposes. Raw materials like blocks, colour cubes, etc., are 'deservedly popular in all age groups'. Locomotor toys like tricycles, doll-carriage, ball, wagons, etc., also are popular with all age-groups. Mechanical toys which can be manipulated just by pushing or winding (5) were found to be of least interest for all age-groups of pre-schoolers.

Alstyne (2) found that children of all age-groups were interested in blocks, clay and dolls. The three-year-olds preferred wagons and books, the four-year-olds balls, beads, small cars and scissors, while the five-year-olds liked crayons most. Spock (71) found that children love simple toys best. Leonard (50) has pointed out that the most popular toys for children are made at home. Again, Page (62) has emphasized the danger of providing too many toys, for 'decisions become increasingly difficult and possibilities are by-passed in the ensuing mental confusion'. Studies of Johnson (45) corroborate this fact.

There is no room in this article to discuss the various playmaterials for different age-groups. The interested reader may be referred to the writings of various authors like Boyco (12), Kawin (46), Washburne (78), Fenton (25), Alstyne (2), Alschuler (1), Johnson (44) and Garrison (29), who have furnished detailed lists of plays, toys and play-materials for children of different age-groups. This is described in detail elsewhere in the present symposium. The only thing that we would like to emphasize here is that on the basis of the investigational reports cited above, it becomes clear that in a country like ours, where pre-school education is in its infancy, there is immense scope for making use of indigenous materials for our nursery schools. We need not bother about costly play equipment at all; instead we could utilize clay, sand, water, charcoal, folk-dolls, folk toys, etc., for the purpose. Specially in the rural areas, the utilization of these things, that are available in abundance and without much cost, will facilitate the advancement of nursery education in our country. They are not only less costly, but also have great significance in the proper development of children. For example, water-play contributes to the development of sensation and is a keen pleasure; at the same time, it contributes to intellectual development in the shape of experiment and exploring. Again it stimulates the inhibited child and soothens the explosive. It has great holding power for young children who are otherwise listless. This is true also of sand or clay. Many toys can be made out of scraps tucked away. Kepler (47) gives an account of such 'toys made from scrap' that can be improvised to suit our needs.

Values of Play

Development of play, as discussed earlier, is essentially intermingled with the development of the child himself. No matter how much psychologists or philosophers differ from each other about what play is, no one today seems to accept the older view that play is just an outlet for superfluous energy; or that it is useless. Instead, it is an accepted fact that play is a necessity for children, as it contributes to the all-round development of a child's abilities of body and mind.

Play trains the child's senses and initiates as well as promotes his insight into the fundamentals of the physical environment in which he lives (56). It helps the child to develop sensori-motor coordination. It enables him to have large muscle development, and to build up a reserve, so that he is not easily susceptible to illness (5).

The child also learns much through play. It is through play that he finds opportunities to use and develop his new skills, to explore new objects, to test his own abilities and to express himself. Axline (7) points out that this is the way that he develops a concept of self. Again, with each new play-experience he gains new concepts (65). Winch's viewpoint mentioned earlier that through make-believe plays, the child learns about the world around him, about which he is so ignorant, is here worth noting. Barker *et al.*, (9) also support the same view when they state that through play the child learns to differentiate between reality and fantasy. Furthermore, in make-believe plays the child plays the adult roles and often discovers the interests that are to fill the central place in his own adult life. This can be best illustrated from the career of Winston Churchill, who in his Autobiography writes, 'My choice of a military career was entirely due to my collection of toy soldiers....the toy soldiers turned the current of my life.'

Through play the child starts becoming socialized. From the second year onwards, by playing with others, he learns social skills. McCurdy (53) observes that an inner feeling of security, unselfishness and co-operativeness comes from the early popularity and acceptability of children with one another. Cockrell (18) points out that when pre-school children are deprived of play-materials, their attention becomes self-centric. Later, through cooperative games, the child not only learns to give and take and to cooperate with others (20), but he also learns to be a good sport whether he is the winner or the loser (24). Gradually, he comes to recognize and obey rules and learns to submerge himself in the moral standards of the group as well as those of society.

Lastly, the value of play in the emotional development of the child can hardly be exaggerated. Every human being craves the satisfaction of certain basic emotional needs—the needs of self-security, self-expression and self-recognition. Play provides opportunities for the satisfaction of these needs. Smart and Smart (70) rightly observe that in constructive plays, it is the completion of work that matters most for children. Actually, it is not the artistic quality of the things done, but the fact that they themselves have created something that gives them the satisfaction of their basic need of self-expression. This is the reason why children do not like adults to improve their work for them. Whenever any of his needs is not fulfilled or thwarted, the child through make-believe plays can overcome that frustrating situation, and can have a substitute fulfilment of his unfulfilled desires (74). It also helps him to release tensions created by environmental restrictions (56) by serving as an outlet for his anxieties (3). Strang (73) has aptly pointed out that the child's make-believe plays often give the observer an insight into his emotional climate—his home relationships, his school adjustments and his adjustments to the community. Intensive researches of Winstet (80), Axline (6), Bach (8) and others corroborate this fact.

Educational Implications of Play

The foregoing discussion on the value of play reminds us of its big significance in the field of education. It is the realization of this fact that prompted several pedagogists to use play as a means in their educational ways and practices, which Cook (19) so aptly termed 'play-way' in education. It is not possible here to discuss, even in brief, all of them. Only a passing reference can be made to the most important ones.

Among the different movements inspired by this conviction, the first is connected with the name of Froebel. Over a hundred years ago Froebel (28), wrote, 'Play is the highest achievement of child development, of human development at this stage, since it is the spontaneous expression, according to the necessity of its own nature, of the child's inner being....play at this stage of life is not a trivial pursuit, it is a serious occupation and has deep significance'. He, therefore, added directed play to the three aspects of Pestalozzi's *Anschauungsunterricht*(35)—Language, Form and Number. Into his kindergarten, the institution for young children, he introduced paper-folding, mat-weaving, clay-modelling, symbolic games and action songs, which, according to him, envisaged the laws of life and nature. Even for youngsters, he suggested gifts—a sphere in the form of a soft ball and then the hard sphere, the cube, the cylinder and various sub-divisions of the cube—with which infants could spontaneously play and so develop.

Next to Froebel, the name of Montessori is worth mentioning. She (57) divides early play activities into motor and sensory education. She stresses the importance of the child's large muscular movements and the necessity for providing adequate scope for their mastery, particularly in readiness for the control of the finer muscular movements necessary in later years and in education. As such, she has devised various didactic materials into which the child is initiated as soon as he enters school. The essential principle of her method is to let the child use those didactic materials in spontaneous play-situations. No doubt, the child receives some preliminary guidance from the teacher or 'directrice' in the use of these materials, but from then onwards all learning is self-directed and initiated. The power of choice is given almost free rein and thought is prompted by the materials he finds round him.

Froebel and Montessori, however, differ from each other in the use and justifiability of make-believe plays. Froebel believed that make-believe play has great significance in the educative process of the child and encouraged the child to make-believe because to him it is characteristic of the child. Montessori regarded make-believe as frivolous and a form of untruth, and as such, was opposed to the encouragement of make-believe plays with its literary counterpart—fairy tales. Nunn (61) points out correctly that both sides erred in their attitudes towards make-believe play. 'Froebelian practice errs where it introduces making-believe gratuitously, that is, where the child's spontaneity does not need its aid, and the Montessorians err in refusing that aid where it would serve to widen the child's range of serious interests and achievements'. As regards fairy tales, we need not be too eager to offer them to children. No doubt they help children to develop imagination, but 'the real world is certainly sufficiently wonderful to stimulate the imagination of any pre-school child'(68). However, they may be introduced when children have developed secure feelings and have formed a sound concept of what the real world is like.

The lead given by Froebel and Montessori was aptly followed by several educators, of whom the names of Armstrong, Parkhurst, Lane and Dewey are worth mentioning. In our country the same idea has been expounded by Tagore. All of them follow the basic principle of play-way in education—namely, the freedom principle. Today, their thoughts have influenced all civilized countries, and it is universally accepted that if the child is to grow and learn effectively, not only in childhood, but also in later years, the older methods of teaching and school government should be so oriented as to exploit fully the spontaneity of individuals, which is the essence of play. The progressive nursery schools, or to be more precise, progressive schools catering for all stages, today with their accent on freedom for the child, are the results of the combined efforts of these great educators.

Play-Therapy

The significance of play in educating the child has a close bearing on some recent trends, known as play-therapy. The basic assumption of play-therapy is that play is the natural medium through which the child expresses his feelings and interests, fears and anxieties, loves and hates, or his needs and motives. It is also an effective and acceptable medium by which the child is able to bring his hostilities out into the open, thereby releasing his pent-up emotional energy. But though all play-therapists believe in this basic assumption, they differ to a considerable extent in their methods and techniques. Some believe in extreme permissiveness, while some believe in direct participation; some work with miniature life toys, while some work with finger painting; some structure the play situation and provide special dolls, while some believe in unrestricted freedom in choosing toys. Each of these approaches can achieve good or poor results, because as therapists will differ from each other as persons, so also is every child different. 'We should not feel that there is a certain pattern of approach which can, or must, be applied to every child' (34).

Again, it is agreed by all that children work out their problems symbolically. But there is no unanimity as regards whether the symbolic situations, materials and actions with the aid of which the child expresses his 'accumulated feelings of tension, frustration, insecurity, aggression, fear, bewilderment and confusion should be interpreted to the child or not. Klein (48) gave even to very young children a full interpretation of their problems. But Axline (6) Fordham (26) Moustakas (58) and others believe in using interpretation only very sparingly. Their basic belief is that every 'individual has within himself, not only the ability to solve his own problems satisfactorily, but, also, this growth impulse makes mature behaviour more satisfying than immature behaviour.......By playing out his feelings he brings them to the surface, gets them out in the open, faces them, learns to control them, or abandons them. When he has achieved emotional relaxation, he begins to realize the power within himself to be an individual in his own right, to think for himself, to make his own decisions, to become psychololgically more mature, and by so doing, to realize self-hood'(6). In this process the task of the therapist is not to interpret the symbolism, but to convey the attitudes of faith, acceptance and respect to the child. 'Faith is reflected in the child when he considers himself to be an important person, someone who has something to offer to himself and others......... Acceptance implies that the therapist actively accepts the child's feelings and his personal meanings, his perception .... The attitude of respect considers all feelings and attitudes, all ways and values that a child reveals and that have been accepted by the therapist as facets of the child's personality which in and of themselves have unique worthiness for the child at that time'(58). If these are conveyed to the child, he himself will work for his maturity and take decisions as regards solving his own problems. The therapeutic process will thus occur in a play situation only when a therapeutic relationship between the therapist and the child as described above, exists.

Some psychologists, however, express doubts as regards the cures claimed by the play-therapists. Play-therapy usually requires many hours of play-interview extending over a long period of time. It is difficult to say how much improvement might have come about because of other factors in the same length of time. As Valentine (76) puts it: 'As yet there seems to be no satisfactory statistical evidence that either the psycho-analytic interpretation of their play to children or play-therapy of a specific type is more beneficial to "problem children" than friendly treatment in a place removed from the source of their troubles. Many of the supposed cures may be due merely to maturation under such conditions'.

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8

EARLY CHILDHOOD EXPERIENCES AND THE DEVELOPMENT OF PERSONALITY AND CHARACTER

Perin H. Mehta

Personality is, indeed, a broad concept—broad enough even to include character. The distinction between the two seems to be mainly in the 'approach' to the underlying behaviour. In 'personality', the approach is essentially *individual*; as Murphy (47) says, 'a psychology of personality deals with all individual aspects of a given human organism except for certain expressly excluded ones'. Personality connotes the individual's peculiar way of reacting to stimuli, overcoming problems, resolving conflicts and tensions, etc., in fact, it is the pattern of responses as viewed from the standpoint of the individual. The emphasis on the individual leads to an accent on 'organization' or 'patterning', which we find in several definitions of personality.

The term 'character' connotes an approach to behaviour which is more social, although individual connotations cannot be excluded. Character is behaviour with reference to some external frame of reference, and not with reference to the individual need for survival or adjustment. Character has thus a normative or an evaluative connotation and is suggestive of the effect of the individual's behaviour on society. The external frame of reference is generally associated with the moral view of behaviour, although character is not co-extensive with moral or ethical behaviour. Neither can all behaviour in conformity with accepted norms of the society in which the individual lives, be labelled character. Values play a very important part in any discussion of character. Whether they express learning from the cultural or sub-cultural milieu, or reflect the individual's unique development, values lend to character its distinctive feature. As Jones (32) says, 'character is a dynamic concept involving inner creativeness and psycho-cultural determination'.

Emphasis on Infantile and Childhood Experiences

Personality being an organization of practically all of the individual's qualities, any attempt to trace its development would mean tracing the development of all these qualities. Thus, personality development would include emotional development, social development, motor development, development of intelligence, abilities and skill, etc. However, there is a tendency among developmental psychologists to exclude from the term 'personality', physical characteristics and cognitive aspects such as intelligence, abilities and developed skills. Personality is, therefore, regarded as having more to do with emotional and social development, and hence with adjustive tendencies. These adjustive tendencies form themselves into patterns and traits which are considered to be the major province of personality.

Researches have been directed more to the identification, analysis and measurement of, and individual differences with regard to, these traits, than to their developmental sequences. Investigators interested in the development of personality have focused their efforts on studying the effects of specific factors, particularly in infancy and childhood. Hence this chapter will deal with such causal factors as infantile and childhood experiences, child-rearing practices and attitudes.

Investigations in the area of character have dealt with individual differences and the influence of factors such as intelligence, sex, environmental conditions in the home and in the community, religious instruction, and recreational activities, such as radio and television programmes, motion-picture attendance, etc. These researches have been mostly conducted on school-going groups and hence do not deal with development in the early years. The focus in this chapter will be on the influence of early experiences on character formation and personality development.

The Contribution of Psycho-analysis

Researches concerning early influences on the development of personality and character owe a great deal to the stimulation received from the pioneering work of Sigmund Freud and his followers. In keeping with his genetic and biological orientation, Freud emphasized the significance of early infantile experiences during sucking, weaning and excretory activities, on the formation of character. Moreover, identifiable character traits have been associated with specific features of psycho-sexual development and a characterology has been evolved in terms of oral, anal, urethral, phallic and genital phases of development.

Fenichel's (16) explanation of influences traceable to the kind of development that occurs in the oral phase is worth studying. He takes the view that oral satisfaction creates remarkable general self-confidence and optimism that may continue through life if this state of self-confidence is not followed by one of the frustrations that breeds vindictiveness and may make the subject demanding. On the other hand, feelings of extreme deprivation in the oral phase of development tend to induce a pessimistic and sadistic disposition. If the course of psycho-sexual development has suffered fixations at the oral stage, the child is likely to grow up to be a highly dependent adult. This dependence may be expressed in one of two ways: either the person may become abnormally passive or he may present an example of exaggeratedly cruel oral behaviour. These last tendencies are often vampire-like in character. People of this kind ask a great deal of others and will not easily relinquish their hold on things. They tend to identify themselves with the person by whom they wish to be fed. Some of them, for instance, act like nursing mothers in all their relationships. They are generous, shower people with gifts and burden them with help. Under happy circumstances, they are genuinely generous; under less happy circumstances they express their need to give to others in an irritating way. Others again in this class are completely ungenerous, never give anything, an attitude that springs from the tendency to behave like the frustrating mother. Curiosity can be traced to oral hunger being displaced to the intellectual field.

Fenichel is of the view that these traits are partly reactions against anal-erotic activities and partly an attempt to sublimate them. The main traits are orderliness, frugality and obstinacy. Frugality reflects the anal habit of retention, sometimes caused by a fear of loss, sometimes by erogenous pleasure. Orderliness and obstinacy are more complex. The first is an extension of conformity to the environmental requirement to excrete regularly; the second an extension of rebellion against this requirement. Under certain conditions, obstinacy may become so extreme that the person may feel bound always to do the opposite of what he is asked to do. 'Anal personalities' are as disturbed in their attitude to time, as to money. They are either grudging or prodigal of time, or both in turns; they may be punctual or unpunctual. More: in their behaviour, anal personalities consistently show sadism or reaction formation against that trait, i.e., masochism.

High ambition and a strong tendency to competition have been associated with urethral eroticism. Modesty has been regarded as a reaction to the fear of castration. Bashfulness and timidity as well as pride and courage are said to develop around the conflicts of the castration complex. Reckless, resolute and self-assured behaviour is considered to be typical of the phallic character. A normal character free from the excess of any traits is associated with the genital stage of psycho-sexual development.

These findings have been derived from the clinical observation by psychoanalysts and psychiatrists of their patients during the course of their analysis. The findings have depended largely upon the memory and verbalizations of the patients and have been influenced by psychoanalytic orientation and theory. Critics representing different fields of social sciences, particularly anthropologists and experimental psychologists, were quick to point out the inadequate nature of the evidence. The observations of psychoanalysts like Melanie Klein and Anna Freud on children themselves have also been regarded as unsatisfactory from a research point of view, as these child-analysts seem to have been more interested in applying the psycho-analytic hypotheses rather than testing them. The concept of specific relationship between childhood experiences and training practices on the one hand and personality traits on the other has been repudiated even by some psycho-analysts. For instance, Erikson ridicules this idea by stating that one cannot fabricate this or that kind of national or tribal character by turning a few knobs in the child training system. He, however, believes that child-rearing practices are related to goals and values which are an essential part of the individual's sense of identity.

Hence a number of studies were undertaken to test these hypotheses by means of empirical and experimental investigations. Several studies centred round the evidence obtained from anthropological inquiries into non-Western cultures.

The cumulative verdict of these studies has been that there is no definite relationship between specific infantile experiences and child-training practices on the one hand, and the specific traits of personality and character on the other. The absence of such definite relationship is not surprising, as the relationships postulated by psychoanalysts should always be considered subject to the influence of ego factors. It has often been stated in psychoanalytic literature that a specific infantile experience may lead to two opposite characters. The authors of empirical investigations seem to have overlooked the influence of ego factors; in fact, it would be impossible for them to provide for this in their research designs. The empirical studies have, however, lent support in a general way to the importance of infantile and childhood experiences in the development of personality and character.

Types of Empirical Studies

Empirical studies of the early influences on the development of personality and character may be broadly divided into two types: (1) those concerning the effects of maternal deprivation, and (2) those dealing with the effects of child rearing practices and the early influences from the home and the neighbourhood. These two types of studies have functional as well as methodological significance.

The effects of maternal deprivation have been extensively studied presumably because of the undesirable results which maternal deprivation in one form or another has been known to have, not only on personality and character but also on intellectual functioning and physical development. Researchers have probably also been attracted to this area on account of the relative convenience with which maternally deprived children can be studied in institutions and foster homes.

From the standpoint of methodology, the studies on maternal deprivation can be further classified as under :

(*i*) Direct studies of children in institutions. Children who have been institutionalized for various reasons have been observed clinically. In addition, the studies have utilized the results of developmental tests and scales, personality inventories and projective techniques. The ages of children have varied from birth to six years.

(*ii*) Retrospective studies on institutionalized individuals. These studies have been carried out on individuals who have had previous institutional or foster-home background. The data is retrospective and the techniques utilized in obtaining them include case history, psychiatric diagnosis, problem checklist, social maturity scales, personality tests and ratings on adjustment. The subjects have ranged from infants to adolescents.

(*iii*) Direct studies on children during the period of separation from parents. Very few of these studies have reported follow-up data which would throw light on the effects of the separation on later personality development. Moreover, the results of these contemporaneous studies as well as of the follow-up studies have been contaminated by the fact that traumatic conditions such as illness and operative procedures, hospitalization, severely disturbed parental relationships, parental rejection, death or disability of a parent, and institutional placement have been associated with, or have followed, the separation.

(*iv*) Investigations involving controlled variation within a given social environment. The studies involve experimental and control groups in the same situation. Rheingold's study (50) in which the experimental group consisted of babies who were 'mothered' by one person according to their needs and the control group of babies who had multiple mothering by hospital personnel, is a study of this type. Such studies have been performed with animal groups also, as for example Melzack and Thompson's (43) study on two groups of puppies and the study by Levine and others (38) on two groups of rats.

Studies dealing with child-rearing practices and the early influences in the home have been of two major types. The first group of investigations have been concerned with showing the specific immediate and long-term effects on personality of infant care practices, particularly those related to feeding and toilet training. The second group of studies have, on the other hand, emphasized the importance of general parental attitudes and parent-child relationships.

A variety of methods have been used in both these groups of investigations. The first group has, however, tended to use as subjects children in a child guidance clinic or in a hospital setting, and have relied more on clinical observation and assessment. In the second group of studies, data has been obtained from mothers and children in a particular geographical area, and more refined statistical methods including factor analysis have been used. Evidence for or against relationships between infant care practices and later personality traits has also been obtained from anthropological studies. Animal subjects such as dogs and rats too have been used for studying these relationships.

Importance of Infancy and Childhood

Before we discuss the evidence presented by these two groups of investigations, it would be appropriate to examine the postulate that infancy and childhood are of great importance in the formation of personality and character. This belief dates from early times. It is not only basic assumption of psychoanalysis but also of several other systems of psychology. However, Stevenson (57) raises a doubt and maintains that the influences received during infancy and childhood are not necessarily more formative of personality than those of the later years. He asserts, 'The suggestion that the events of childhood and infancy always exert a special influence in forming the adult personality is still a statement of opinion, not of fact.' In support of this view he cites several researches, of which two pertaining to the impermanence of the effects of childhood experiences, deserve to be mentioned.

One of these investigations was conducted by Caplan (9) on the children raised in the communal agricultural settlements of Israel. In these settlements children are reared largely by professional workers in nurseries and later in school houses. Although they spend some time with their parents, nearly all the training and disciplining are carried out by professional workers. Each child experiences two changes of workers between birth and three years. Caplan found that these children in their early years show marked signs of psychological disturbance such as temper tantrums, thumb sucking and enuresis, but they grow up to be healthy adults, both physically and mentally. However, since comparison with a matching control group was not made, the conclusions lack the support of scientific validity.

The other study cited by Stevenson in support of his view was conducted by Morris, Sooker and Buruss (45) who followed up 54 severely shy, anxious and withdrawn children who were disturbed enough to be examined in a child guidance clinic. These children were not treated in the clinic, but recommendations and advice concerning them were given. The children, whose median age at the time of examination was seven years, were studied again 16 to 27 years later. The investigators found that two-thirds of them had made a satisfactory adjustment and one-third a marginal adjustment; only two were considered ill, and only one was found to be schizophrenic. While evaluating the results of this study, Stevenson does not take into consideration the probable effects of the clinic's advice and recommendations, nor the possibility that the children may have received treatment at some other agency. Hence, neither this study nor that of Caplan lends any clear support to Stevenson's thesis.

Murphy (47) is also of the view that although the experiences of the first 12 months are important for the development of personality and mental health, the influence of the experiences of the subsequent years is also substantial. Citing as evidence Shirley's study of normal children over a period of years, she asserts that the experiences of the next five years can offset the good or bad effects of the experiences in the first year. In support of this view, Murphy also draws upon anthropological evidence put forward by Bateson and Mead in their account of the Balinese culture. According to them, the Bali infants who are tenderly nursed and gratified during the first months but are emotionally frustrated during the second and subsequent years, developed emotional indifference to personal relations when they grew up.

As against the evidence of such studies we have the evidence from investigations on animal subjects which bring out the importance of infancy. Hunt (28), experimenting with two groups of rats, subjected them to food deprivation for 15 days commencing in the first group at the age of 24 days and in the second group at the age of 32 days. The period of deprivation was followed by unlimited feeding for five months and this was followed by a second period of deprivation for five days. The control group was also subjected to deprivation during this period but not during infancy. Hunt found that the rats in the 24-day group responded to the second period of deprivation by hoarding more than two-and-a-half times as many pellets of food as did the rats in the control group; the rats in the 32-day group did not show hoarding in excess of the rats in the control group.

Evidence regarding the effects of infantile experience on physical performance comes from the experiment of Wolf (63), who impaired the hearing of one group of rats by taping their ears, and the sight of another group by taping their eyes, for several weeks during infancy. When the restraints were removed the animals regained their capacity to hear and see but failed to come up to the level of the performance of a control group in competition with them. Rats whose functions were impaired for a period after infancy and then restored were not handicapped in the exercise of these functions during the competitive situation.

The results of such experiments on animal subjects are interpreted to show the greater effect of deprivation or frustration during infancy than during later periods. The theoretical problem, however, lies in their applicability to human subjects and also in generalizing from physical traits to psychological traits. However, numerous studies on human subjects have persistently pointed to the significance of early infantile experience for later developments in intellectual and personal-social functions. It may be added, however, that later studies tend to prove that the effects are not as lasting and as damaging as the earlier studies had made them out to be.

Maternal Deprivation

The concept of maternal deprivation, according to Yarrow (64), included four patterns of deviation from a hypothetical mode of maternal care: (*i*) institutionalization, (*ii*) separation from mother or mother substitute, (*iii*) multiple mothering, and (*iv*) distortions in quality of mothering such as rejection, overprotection and ambivalence. The four patterns or conditions are seldom obtained in 'pure' form; they are mostly found simultaneously or sequentially in complex interaction.

The essential feature of institutionalization is that the children are deprived of the normal care and affection which they should have received in their own home; however, as the institutions differ with respect to several variables such as the degree of care and sensory stimulation, the deprivation experienced by the infants varies qualitatively. Separation from mother or mother-substitute has been generally associated with traumatic events such as illness or death of a parent, or illness of the infant necessitating hospitalization. Multiple mothering refers to a condition in which there is no one person continuously performing the major mothering functions. This may arise as a result of institutionalization or maternal separation, but in several cultures it is an accepted practice of child-rearing. Hence it may not be quite appropriate to label it as a kind of deprivation. Distortions in the quality of mothering reflect maternal attitudes; some of them may involve 'psychological' deprivation, but all of them cannot be said to have the effect of deprivation. In this section of the chapter, therefore, evidence is presented from studies on children who experienced institutionalization and maternal separation, and the evidence on 'multiple mothering' is presented later, along with that on child-rearing practices.

The effects of institutionalization on personality and character centre chiefly around disturbances in establishing and maintaining close interpersonal relationships. One form which the disturbance takes is that of indifference to social attachments and inability to establish warm personal relations, a personality pattern which Bowlby (5) has labelled the 'affectionless character'. The other manifestation is that of a constant and insatiable seeking for affection. Although this manifestation is different in form from the previous one, it is dynamically related to it. In a study of orphans in Ahmedabad, Khatri (34) found that orphan girls had a larger circle of friends than family-reared girls, and suggested that this might be due to the former's inability to establish meaningful relationships with a significant few. Dasgupta (11) who administered a 'Test of Tenderness' to children in an orphanage in West Bengal found that the orphans scored significantly less than a group of normal children of the same age on 'the wish to love' as well as on 'the wish to be loved'. However, the sample of normals is not described, and nothing is stated about the 'Test of Tenderness' except that the object of the investigation was as much to understand children as to be convinced of the validity of the measuring instrument. Obviously, no conclusion can be drawn from such a poorly designed study.

These deviations in social behaviour, observed among infants during the period of institutionalization, are carried over into adolescence and adulthood. Deviations also take the form of diffuse and impulsive behaviour as well as overt anti-social and aggressive behaviour. A lack of normal anxiety or guilt about aggression, a low level of frustration-tolerance, a lack of goal directedness and low achievement motivation have been noticed in institutionalized children by Bender (3) and Goldfarb (18). These deviations are not, however, necessarily prognostic of psychosis or severe maladjustment. Beres and Obers (4), in their retrospective study of 37 cases with institutional background, found that by late adolescence, half of them were making a favourable overt adjustment.

Maternal Separation

Results of investigations in this area are consistent about the immediate and short-term effects on infants and pre-school children. These consist of violent emotional reactions, followed by active rejection of adults culminating in apathy and loss of interest in people. This last phase has been characterized by Robertson and Bowlby (52) as mourning, and labelled 'anaclitic depression' by Spitz and Wolf (56). The mourning phase may be followed by a denial mechanism whereby the infant represses the mother image and transfers his attachment to a substitute mother, if one is available; if not, he may show promiscuously friendly behaviour with all adults without establishing meaningful attachments.

With regard to the long-term effects on personality and character, the earlier investigations of Bowlby (5) led him to conclude that maternal separation produced 'affectionless' characters and psychopaths. However, later investigations by Bowlby and others tended to show that the effects were not severe. In a follow-up study of 60 children between six and 13 years of age who had been in a sanatorium for varying periods of time before the age of four, Bowlby *et al.*, (6) found that although the children showed tendencies towards withdrawal and aggression, over one-third were rated as having been well-adjusted or adjusted with minor defects. The authors concluded that the earlier statements about the damaging effects of maternal separation were rather overdone.

Studies on maternal separation further indicate that the intensity of the impact is governed by such factors as the age at which the separation 'occurs, the kind of mother-child relationship preceding the separation' and the character of substitute mothering after the separation. Spitz and Wolf (56) found that where the preceding mother-child relationship was of a poor kind, the infants did not develop severe reactions, and concluded that the severity of the reaction was inversely related to the goodness of the mother-child relationship. Lewis (40) however, found that infants who had received normal maternal affection tended to make good or fair adjustment. To reconcile these two conflicting findings, Yarrow (64) has hypothesized that a close relationship with the mother before the separation is followed by more severe immediate reactions but ultimately by better adjustment, than if the mother-child relationship is of a poor sort. Regarding the effect of substitute-mothering, the investigations tend to support the expectation that satisfactory substitute-mothering will soften the effects of separation. Spitz and Wolf (56) noted that the infants did not develop the depressive syndrome, and Robertson and Bowlby (52) found the absence of complete withdrawal from social contact. In the Spitz and Wolf study, however, the adequacy of substitute-mothering was not defined in terms of any independent criteria.

CHILD-REARING PRACTICES AND MATERNAL ATTITUDES

It has been suggested by some investigators that child-rearing practices are reflections of basic attitudes of the mother towards her child. Levy (39), for example, relates the period of breast feeding to the maternal attitude of rejection or overprotection. Ribble (51) attributes the inability to 'mother' a child to the conscious or unconscious rejection of the child on the part of the mother.

If all child-rearing practices are determined by attitudes, then it might be more appropriate to establish a relationship between the attitudes and the practices, and to investigate primarily the effects of the attitudes.

In order to investigate this problem, a study was undertaken by Sewell, Mussen and Harris (55) of the child-rearing practices of 162 Wisconsin mothers of five-and six-year old children. If general parental attitudes influence or determine child care practices, the authors argued, then consistency in the practices might be expected. All favourable practices would be associated with each other or fall into constellations or groups of inter-related practices. If the practices were highly inter-correlated, the authors hypothesized, a general factor would emerge as a result of factor analysis of the scores on the practices. Scores on 38 child training variables were obtained from intensive personal interviews with mothers, the high scores being given for those aspects of the practices regarded favourable by the psychiatrists. The score on each variable was correlated with the score on every other variable. Most of the intercorrelations were found to be low and no general factor emerged. The authors concluded that for the parents in the sample, there was no general factor which was reflected in all or most of their child training. However, where the matrix was further factor-analysed, factors could be extracted accounting for nearly 33 per cent of the variance. The authors could define six such factors : (*i*) permissiveness in early feeding; (*ii*) permissiveness in toilet training; (*iii*) parent-child interaction (much activity between parents and child); (*iv*) non-punitive treatment factor; (*v*) promotion of independence factor; (*vi*) casual treatment factor (casualness and lack of rigid regulations and scheduling).

Another noteworthy classification of behaviour patterns of parents has been developed by Baldwin, Kalhorn and Breese as a part of the work of the Fels Research Institute's Home Visiting Programme. Inter-correlations among ratings of parent behaviour on 30 variables revealed three clusters of behaviour. The authors labelled these as the three syndromes of Acceptance of the Child, Indulgence, and Democracy in the Home, which are indicative of basic parental attitudes. Each of the syndromes was assigned three intensity levels as indicated below :

> Acceptance of the Child : rejectant—casual—acceptant. Indulgence : nonchalant—mixed—indulgent. Democracy in the home : autocratic—mixed—democratic. Further analysis revealed seven different common patterns which accounted for about 75 per cent of the families studied. These patterns were : (1) rejectant—nonchalant, (2) rejectant—autocratic, (3) casual—indulgent, (4) casual—autocratic, (5) acceptant—indulgent, (6) acceptant—democratic, and (7) acceptant—democratic—indulgent.

Similar 'factors' or 'dimensions' of child-rearing practices have been found in Sears, Maccoby and Levin's (54) study on *Patterns of Child-rearing* and Wittenborn's (62) *A Study of Adoptive Children*. These factors do tend to show relationship between certain attitudes and certain practices.

Anthropological evidence, however, does not support the view that child-rearing practices are related to attitudes. The same training practices occur in widely different cultures in which the parents seem to have quite different attitudes towards their children. The finding of relationships between certain child-rearing practices and attitudes in modern cultures does not justify dispensing with the treatment of specific child-rearing practices in relation to the development of personality and character.

Child-rearing Practices

Systematic studies of child-rearing practices such as those by Sewell, Mussen and Harris (55), and by Sears, Maccoby and Levin (54) identify a large number of such practices. Investigations concerning the effect of these practices on personality, character and physical development have, however, been limited in number. Practices, which have been extensively studied can be grouped under five heads: (*i*) feeding practices; (*ii*) practices relating to thumb sucking; (*iii*) toilet training practices; (*iv*) 'mothering' practices; (*v*) practices restricting movements.

The largest number of studies seem to be have been on feeding practice which can be further divided into: (*i*) bottle *versus* breast feeding; (*ii*) length of breast-feeding; (*iii*) self-demand *versus* scheduled feeding; (*iv*) weaning. Investigations on toilet-training practices generally deal with the rigidity of the practices and the age at which the practices begin. 'Mothering' refers to the intimacy of physical contacts with the infant as expressed in cuddling and caressing by one individual, and hence studies on mothering practices usually deal with two variables, viz., adequacy of mothering and multiple mothering.

BOTTLE VERSUS BREAST FEEDING

Earlier studies by Rogerson and Rogerson (53) and by Hoefer and Hardy (27) on groups of infants who have been breast-fed or bottle-fed have on the whole shown that the latter tend to have poorer health, greater restlessness, more nervousness and inferior physical and mental development. These studies have been criticized on the methodological ground that no effort was made to equate the groups on other factors. A study by Faber and Sutton (15) which employed greater experimental controls showed the bottle-fed babies had in the long run better health and fewer diseases than their breast-fed counterparts. Although effects on personality and character may be surmised from the investigations reported above which describe the effects in terms of general physical and mental development, it must be concluded that there is no empirical evidence in favour of either bottle-feeding or breast-feeding with regard to effects on personality and character. Even the psychoanalysts who emphasize the importance of breast-feeding admit that some children develop very well without it (35).

LENGTH OF BREAST-FEEDING

In this area investigators have been concerned with the optimum length of the breast-feeding period for healthy, physical and emotional development. No linear correlation has been found between the duration of breast-feeding and any major aspect of personality or character. On the basis of some studies one might speculate that the medial duration of breast-feeding (neither too brief nor too prolonged) is more conducive to normal personality development, but this is contradicted by other studies. Pearson's (41) study of 72 problem children showed that children breast-fed less than six months or more than ten months were more maladjusted at school and displayed more timidity and nervousness than those breast-fed for six to ten months. However, Childers and Hamil (10) working with 469 problem children found that those breast-fed for one to five months showed a higher percentage of abnormal behaviour than those breast-fed for less than one month or more than five months. A similar result was obtained by Maslow and Szilagyi-Kessler (42) who correlated the length of infantile breast-feeding of college students with their scores on a security-insecurity inventory. They found that 'the highest security scores were obtained by those who were breast-fed little or not at all and by those who were fed at the breast for over a year.'

Studies of the relationship between specific personality traits and the length of breast-feeding have been rather few. Goldman-Eisler (20) has, however, been able to demonstrate relationships between early weaning and personality traits categorized as 'orally ungratified type' and between late weaning and personality traits categorized as 'orally gratified type'.

SELF-DEMAND VERSUS SCHEDULED FEEDING

There are very few experimental studies to support the prevalent view that those infants who are nursed whenever they demand nursing turn out to be more confident and stable adults than those who are nursed according to a laid down routine. Two studies carried out on small numbers of children give rather contrary results. Trainham's (60) study on a group of 22 children showed that those who were fed on demand were superior in all tests of development to children who were fed according to a schedule. On the other hand, Escalona's investigation (14) on a similarly small group of infants revealed that those who had scheduled feeding showed more rapid maturation by test scores.

WEANING PRACTICES

Weaning practices refer specifically to the manner in which the infant is weaned from the mother's breast or the bottle and also from thumb-sucking. Psychoanalysts regard weaning as causing great frustration and sudden weaning as having the effects of a trauma. Gradualness in weaning has, therefore, been recommended by them. Experimental data correlating different types of weaning with particular aspects of personality do not seem to be available. However, Albino and Thompson's (1) description of the effects of sudden weaning on Zulu children is quite revealing. The date of weaning in this culture is generally decided in advance by the grandmother. The mother's breast is smeared with aloes and offered to the child at intervals during the day. The consequences of this procedure were examined through careful interviews with the mothers and the relatives and through observation of 16 babies between 24 and 25 months of age. The authors were led to the conclusion that although weaning is sudden and disruptive, it is also socializing and maturing.

THUMB-SUCKING

Thumb-sucking has been regarded by psychoanalysts as a reaction to oral frustration and, therefore, it has been advocated that weaning from thumb-sucking should be carried out very gradually. There have been several studies and critiques on the point whether thumb-sucking is a reaction to oral frustration. However, there seem to be no empirical studies to demonstrate the effects of permissiveness or otherwise in thumb-sucking on the formation of personality.

TOILET-TRAINING

Practices in relation to toilet-training are associated with the anal phase of psycho-sexual development which has been considered to be of great importance for the development of personality and character. Commencing the toilet-training too early and enforcing it rigidly are believed to have unfortunate consequences on adult personality. The commencement of toilet-training at a very early age has also been opposed on neurological grounds. The myelinization of the pyramidal tract is not completed until the infant is at least a year old and hence the rectal sphincter is not under the voluntary control of the infant till that time. Thus early toilet-training is believed to make demands on the infant which its organism is not yet mature enough to fulfil voluntarily. However, the relevant neurological facts are not yet fully known to support this argument.

Among the immediate effects of early and rigid toilet-training, rage, fear and constipation have been reported. Huschka (29) working with 213 problem children studied the effects of 'coercive' training which he defined as that started *before* eight months and completed *before* 18 months, and of 'adequate' training, which he defined as that begun *after* eight months and completed *after* 18 months. He found that the coercively trained children manifested fear, rage and constipation more frequently than the adequately trained children. There are no studies to indicate that these differences between coercively trained and adequately trained children persist over the years.

As mentioned earlier, the personality traits of frugality (bordering on stinginess), orderliness and obstinacy have been associated with the anal stage of psycho-sexual development. In order to confirm such relationships, Hamilton (25) compared a group of 200 adults who recalled constipation and other anal-erotic traits in childhood with another group of adults who did not, in personality traits of stinginess, sadism, masochism and concern for clothes. The evidence obtained supported the Freudian hypothesis. Gorer (23, 24) has attributed several features of Japanese culture to the rigid bowel training of the Japanese.

PERMISSIVENESS IN FEEDING AND TOILET-TRAINING PRACTICES

Permissiveness as a general factor running through the practices discussed above has also been studied. The relationship between permissiveness or rigidity in feeding and toilet-training practices, on the one hand, and personality traits, on the other, has been the theme of several experimental as well as anthropological investigations. Such studies do not lend support to the view that permissiveness in feeding and toilet-training practices results in the formation of mentally healthy and stable personalities. The Pueblo Indian infants enjoy unlimited indulgence, yet the personality of the Pueblo Indian adults is marked by maladjustment and apprehensiveness (19). The anxiety level among Navaho Indian adults is very high although they receive a maximum of protection and gratification in infancy (37). A great deal of permissiveness in breast-feeding and toilet-training is observed among St. Thomas children of lower economic class, yet they turn out to be insecure, suspicious and egocentric adults (8).

Moloney's (44) study on the Okinawans, however, favours the view that permissiveness in early child-rearing practices fortifies them against the occurrence of mental illness. He reports an exceedingly low incidence of mental illness along with a high degree of oral gratification and affection. This study has been criticized on the ground that admissions to mental hospitals, which Moloney used as a criterion, are not a valid evidence of occurrence of mental illness. Moreover, another study on the Okinawans in Hawaii (where they continue the same child-rearing practices) showed that they had a considerably higher incidence of mental illness than other racial groups dwelling in the area (59).

The hypothesis of a relationship between oral and anal indulgence or frustration and specific personality traits is also not supported by experimental anthropological studies. In both Kaska and Haitian societies babies are fed when they so desire and receive no pressure to control elimination; and yet the Kaska personality is introvert and the Haitian extrovert (61). Strauss (58), working in Ceylon with Sinhalese mothers and their third grade children, failed to find any relationships between oral and anal frustration as measured by severity in feeding and toilet procedures and results on personality tests.

MOTHERING

Mothering, as we have observed, refers to the tactile contact and cuddling, and stimulation of the infants by mother or mother substitute and emphasizes the relationship of the infant to one such individual only. It has been hypothesized by psychoanalysts that adequate mothering is necessary for the developmen of a healthy and normal personality. Whereas the hypothesis has received unequivocal support from studies on animals, the evidence from clinical observations of human infants is rather conflicting.

Melzack and Thompson (43) observed the behaviour of 21 Scottish Terrier puppies that were reared for the first seven to ten months of their lives in cages from which nothing was visible except the ceiling. They used as controls 16 puppies that were raised as pets in homes or laboratories. They found that the experimental puppies were very inept in competitive situations as compared with the control puppies. On tests of security the experimental puppies showed diffuse unorganized excitement rather than sustained or well-oriented activity. However, both the experimental and the control groups showed the usual 'aggressive stalking' behaviour in response to a timid man. Levine *et al.*, (38), investigating the effects on infant rats of early handling and shock found that the subjects handled in infancy, with or without shock, showed significantly greater emotional stability than those not handled, as measured by low scores on defecation, freezing and activity level at the time of adult testing.

Perhaps the best evidence in support of the importance of mothering comes from the investigations of Harlow (26) on monkeys. A group of Macaque baby monkeys was removed from their real mothers and reared in a controlled environment with two artificial 'mothers'. One of the mothers, made of wood but covered with sponge rubber and soft cloth (referred to as 'cloth mother'), provided excellent contact comfort to the infants, whereas the other made of wire (referred to as 'wire mother') failed to provide this comfort and represented poor mothering. Both the mothers were identical in all other respects including their capacity to nurse which was created by mechanical devices. Half the babies were nursed by the cloth mother and the other half by the wire mother. The effects of contact comfort were then studied in terms of behaviours, such as length of time spent by the infants with each of the mothers, responses to fear-producing stimuli, etc. The monkeys in both groups spent more time with the cloth mother and clung to it more frequently when presented with fear-producing stimuli. From such observations, Harlow concluded that 'contact comfort is a variable of overwhelming importance in the development of affectional response, whereas lactation is a variable of negligible importance.'

Similar conclusions, however, cannot be drawn from experimental studies on human infants. Dennis (13) raised twin girls from birth in a condition of extreme isolation. They received the minimum attention required for feeding and bodily care, were made to lie supine on their back and were not spoken to, or fondled or played with in any way till they were seven months old. They were also screened off from each other. Observations after the seventh month showed that the infants during the first year showed the same record of development (with the exception of a few physical capacities) as the normal children. Hence Dennis came to the conclusion that normal behavioural development can occur in some infants when most of the first year is spent under conditions of minimum social stimulation and of very restricted practice. In other words, a large number of acts on the part of the adult, which have been held by some people to be of importance, may be dispensed with. However, Spitz and Wolf's (56) observations on infants six to seven months old who had their mothers removed have shown that some of them developed depressive symptoms.

MULTIPLE MOTHERING

Multiple mothering has been generally considered to refer to an environmental setting in which a number of different persons perform the material functions for the child with varying degrees of adequacy and of consistency. It has been commonly associated with inadequate maternal care, which is not quite true. Although many accounts of multiple mothering in various cultural contexts are available, scientific investigations concerning their effects on later personality characteristics or deviations are, indeed, few. Rabin's (49) investigations on Israeli children reared in 'kibbutzim' (in which the mothering function is shared by the biological mother and the caretakers) have shown that children brought up in this manner display initial retardation in the personal-social area; however, as they grow they show better emotional control and greater social maturity. The follow-up studies of infants reared in home management houses (set up in University home economics department to provide practical experience in child care for the students) are in agreement with finding no evidence of intellectual retardation and no gross personality disturbances. Experimental studies also reveal that no significant damage is done to the child who has received multiple mothering. Rheingold (50) studied the behaviour of 16 infants in an institution, half of whom were cared for by one individual (viz., the experimenter) and the other half by several members of the hospital staff. The babies who received care from one individual were socially more responsive. On Cattell and other tests of development, however, they made slightly but not significantly higher scores.

RESTRAINING OF MOVEMENTS

Practices restraining movements of the infants are quite common. In cultures where they are very severe, it is the custom to swaddle the new-born child or to tie it to a cradleboard during the first years of life. Psychiatrists have held that the restraint of movements is perceived by infants as frustration, and that this has lasting effects on personality. There have been no long-term studies on the effects of restraint on movements in infancy. Anthropological evidence is also not clear-cut as regards the traits such practices are likely to engender. Diverse traits such as aggressiveness, passivity and stoicism have been associated with these practices by anthropologists working with different tribes. The short-term reaction to such practices also varies and is not in all cases a frustrating experience as postulated by some psychologists. In most cases, the practices seem to be accepted by the infants.

Effects of Maternal Attitudes

Direct investigations of the effects of maternal or parental attitudes are, indeed, few. These do not show any specific relationships between the two sets of variables, although they do indicate the importance of the attitudes in the development of the child's personality and character. Johnson and Szurek (30, 31) studied a number of children and their parents in therapy, and related the attitudes and suggestions of their parents to the behaviour of their children. They found that a wide variety of psycho-physiologic and sociopathic symptoms could be attributed to parental attitudes and impulses. Burchinal *et al.*, (7) investigated the relationship between the attitude of acceptance on the part of parents and the adjustment of children. To assess the former, they used a questionnaire type scale of acceptance-rejection, and to measure the latter they used Roger's Test of Personality Adjustment. Correlation analysis showed no association. Gallagher (17) using college students as subjects failed to find any relationship between parental attitudes of harshness towards children and authoritarianism and opinionation in the children.

Quite a number of studies have investigated the effects of parental personality rather than of parental attitudes on personality development. Most of them have been conducted on parents of psychotics and abnormal subjects, using normal individuals or another group of abnormal subjects as controls. Generally speaking, no specific relationships have been observed when the instruments used have been questionnaire type of personality inventories. For instance, Goodstein and Dahlstrom (22) failed to find differences on MMPI scores of parents of stuttering and non-stuttering children. Goldstein and Carr (21) found that mothers of catatonic and paranoid schizophrenics did not differ on an attitude scale of items related to child-rearing, although the scale had previously proved to differentiate between mothers of schizophrenics and non-schizophrenics. This suggests that the same or similar parental attitudes can contribute to different pathological results.

A very well-designed study by Kohn and Clausen (36) suggests a relationship between a certain combination of the mother's personality and the father's personality and the incidence of schizophrenia. Forty-five young schizophrenics and an equal number of controls matched on several variables were interviewed to determine the authority behaviour of their parents. The data closely resembled the reports made by parents or relatives for history interviews. The major finding was that schizophrenics reported more frequently than normal persons, that their mothers played a very strong authority role and their fathers a very weak authority role. This was found true regardless of the sex of the patient or his socio-economic background. It was further found that patterns of parental authority reported by normal males differed from those reported by normal females. Similarly, normal respondents of differing socio-economic background reported differing patterns; but schizophrenic patients of differing socio-economic levels reported the same pattern. Notwithstanding the results of this study the general conclusion which may be derived from studies in this area is that they have not shown relationships between specific maternal (or parental) attitudes and specific personality traits.

CONCLUSION

The effect of early childhood experiences, stemming from child-rearing practices and parental attitudes, on the development of personality and character has been the main theme of this chapter. An attempt has been made to examine the extent to which the widely prevalent assumptions concerning the importance of early experiences, and the relationship between infantile experiences and specific traits of personality and character, are supported by empirical evidence. These assumptions seem to have been partly governed by the scientific motive of bringing order into the chaotic field of personality theory and partly by the desire to help parents and others concerned with the upbringing of children with specific suggestions on child-rearing.

The evidence reported in the chapter supports, by and large, the assumption concerning the importance of early childhood experiences in genera for later personality development. This, however, does not mean that the effects of the early experiences can never be modified, for studies by Caplan (9) and by Morris, Sooker and Buruss (45) have indicated that later experiences can modify the effects of early experiences to a significant extent or that later experiences are no less crucial than early ones. Studies on animals have, on the whole, yielded more clear evidence for the importance of early experiences than have studies on humans. The difference is probably accounted for by better methodological control in the case of animals. Alternatively, the difference could also be interpreted to mean that human beings are affected to a greater degree by later experiences; this interpretation would be in line with the fact that they are subject to the influence of many more environmental factors than are animals.

The evidence fails to lend any appreciable support to the psychoanalytic hypotheses concerning the relationship between specific experiences and the development of specific traits of personality and character. However, it must be said that investigations on institutionalized and maternally deprived children are consistent about the kinds of traits which these individuals develop. Studies concerning relationships between specific child care practices and personality traits have not presented any clear picture; in fact, in certain cases there have been sharp contradictions in the findings. This holds good for both experimental as well as anthropological investigations. Studies on animal subjects may not be regarded as suitable for testing such hypotheses, but the investigations of Harlow (26) have indicated the possibilities of relating animal-rearing practices with the development of personality traits.

Similarly, the investigations reviewed here also fail to support the hypotheses concerning relationships between parental attitudes and the development of specific personality traits. The investigators have focused more on parental personalities than on attitudes, and have more often used as subjects abnormal, institutionalized individuals with the result that abnormal traits have been studied more than normal traits in this context. Such studies have, by and large, failed to show a relationship between the personality traits of the parents and the clinical syndrome of their children. A noteworthy exception to this general picture is the study by Kohn and Clauson (36) which suggests that a specific combination of mother's and father's personalities could perhaps be significantly related to the development of abnormality in general or to a specific syndrome of abnormality.

In order to understand the lack of well-defined and clear relationships in this field, we should take cognizance of several factors which complicate the picture. In the first we must reckon with the ego factors which lead the infants to react differentially to the same experience. Hence it is not the specific child-rearing practice or maternal attitude as such, but the psychological mechanism which the child's ego employs to cope with the tensions created by the practice or the attitude, which may determine the kind of personality or character. In this connection we may recall that psychoanalysts have maintained that a specific infantile experience may lead to the development of personality traits contrary to one another in different individuals.

In addition to the ego factors, we must take into account the various situational and environmental factors which interact with the ego factors and constitute the total situation for the infant. It is this total situation which may be expected to play a determining role rather than a particular practice or attitude. This view gains support from the trend that investigations which involve more than one variable of infantile experience tend to show a relationship between these variables and traits of personality and character. If studies utilizing better research designs and dealing with a complex of variables (rather than a single variable) are conducted, it seems likely that well-defined relationships will emerge.

SUGGESTIONS FOR RESEARCH IN INDIA

A search for Indian investigations concerning the effects of early childhood experiences, particularly child care practices and attitudes, shows that very little research has been done in this area in our country. Sociologists and social psychologists have been interested in studying family structure and parent-child relationships, particularly in the rural areas of the country. They have also been inclined to consider the effects of these on personality and mental health. However, no longitudinal or experimental investigations involving control groups seem to have been made.

In view of the importance of the subject from the standpoint of promotion of mental health as well as development of personality theory, the need for conducting well-designed studies in this area is evident. The changes occurring at present in the family structure and function, consequent upon the growing industrialization and urbanization of the country have added to the importance of the subject. Kennedy's study (33) is a case in point. Investigating parent-child relationships in a rural community and an industrial township, she found that the rural children were 'freer, more imaginative and perhaps less demanding than their cleaner, more dexterous and educated city cousins'. We need to know the extent to which this finding is generalized, and the factors contributing to the unfavourable aspects of the development of the town-dwelling children, if we wish to promote healthy personality development in the future generations.

Indian investigators intending to conduct researches in this field can well profit by the experience of Western investigators. Survey type of investigations are not likely to yield dependable results as their findings are generally contaminated by the effects of several intervening variables. In order to control the effects of other variables, it is necessary to carry out well-designed experimental investigations, involving carefully matched control groups. Care should also be taken in the selection of tools and techniques for the assessment of personality traits.

Another point which emerges from the experience of Western investigators is that a single variable of child-training practice or attitude does not tend to correlate as highly with aspects of later personality development as does a combination of two or more variables. Studies involving combinations of those variables which appear to be promising on the basis of clinical experience or the results of investigations in other cultures, should, therefore, be preferred to investigations involving a single variable.

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9

INDIAN RITUALS AND PRACTICES INDICATING THE AWARENESS OF THE CHILD DEVELOPMENT

B. Kuppuswamy

The Four Āshramas

The *Dharmashāstras* have worked out in great detail the theory of the four stages of life in the development of an individual. The first is the *Brahmacharya* stage, which lasts from the age of six or eight to about 20 years. This is the stage in which the individual lives in the *Gurukula*, in the house of the teacher and acquires the necessary knowledge to fulfil the responsibilities of later life. Second, there is the *Grihasta* stage where the young man, after finishing his studies, marries and engages himself in his profession or occupation. He has to fulfil biological as well as social obligations. Then, there is the third, the *Vānaprasta* stage where the husband and wife retire from their normal family as well as occupational responsibility and devote their time once again to study and meditation. Finally, there is the fourth stage of the *Sanyāsa* where the individual gives up all social ties and becomes, as it were, a citizen of the world. Thus we find here a concept of human development as well as the distribution of the training and responsibility.

The ultimate aim of human life, according to the ancient Indian view, is self-realization, after a study of the relevant literature during youth and after fulfilling family and occupational responsibility. The word *Āshrama* is derived from the word '*shrama*' meaning effort. Thus, the whole course of human life from childhood to death, according to the Indian view, is one of an effort to build oneself up. In other words, the ancient Indians looked upon the whole of life as a discipline to attain self-realization. It also implies that an individual has to train himself so that he can exert himself efficiently to attain self-development. Thus human development is not, according to the ancient Indian view, a mere matter of biological development. It is something involving effort or 'shrama'.

The Four Purushārtas

This is brought about very clearly in the other concept of *Purushārtas*, where the individual is expected to satisfy his desires (*Kāma*), acquire wealth (*Artha*) in the light of social norms (*Dharma*) and finally strive for self-realization or liberation (*Moksha*). As a student, he would acquire the necessary knowledge and skills so that he attains these four human goals.

The Four Varnas

It is true that the stage of *Brahmacharya* was required only for the first three *varnas*, viz., *Brāhmana*, *Kshatriya* and *Vysya*. They were called the *Dvijas*. On the other hand, the large majority of human beings, who did not belong to these three groups, were not required to have the first *āshrama*, viz., *Brahmacharya*. Similarly, women were not also required to devote themselves to study during their youth. In other words, women, as well as a large majority of men were supposed to pick up the necessary knowledge and skills informally. The formal courses were designed only for people who were keen to acquire learning or power or wealth. However, irrespective of sex and *varna*, all human beings were supposed to go through the other three *āshramas*, and pursue each one of the four human goals or *Purushārtas*.

Stages of Human Development

In a broad way there are six stages of human development recognized in the *Dharmashāstras* as well as in ancient Indian literature. We may indicate these different stages as also their duration in the following way:

1. *Saisava* from birth to six years of age
2. *Bālya* from six years to 12 years
3. *Kaumāra* from 12 to 18 or 20 years
4. *Youvana* from 20 years to about 40 years
5. *Praudha* from 40 years to about 60 years
6. *Vārdhakya* the period of life after 60 years.

While informal learning takes place from birth to old age and death, formal learning takes place during the second and third stages, viz., *Bālya* and *Koumāra*.

Rituals Associated with Development

Even today a number of rituals are performed in Hindu families, which have significance for the growth of an individual. These rituals are formally described in ancient Indian texts called *Grihyasūtras*. They deal with the various ceremonies which are obligatory in the Hindu families. The description of these ceremonies will show that there was awareness among the ancient Hindus about the various stages of growth of an individual.

1. GARBHADHANA or foetus-laying ceremony at the consummation of marriage.

2. PUMSAVANA SAMSKARA or (male-making ceremony). This ceremony is performed during the third month of pregnancy indicating that the ancient Indians believed that the sex of the child was determined during the third month of the pregnancy. As an agricultural community they were eager to have male, rather than female children. The aim of this ceremony is to influence the sex of the embryo. Both these ceremonies are performed before the birth of the child.

There is a third ceremony that is observed among Hindu families but is not described in the *Grihyasūtras*. This is the *Simanta* ceremony which is performed in the seventh month of pregnancy, when the pregnant woman is given new clothes, bangles and jewels. All the women gather, give the prospective mother presents and partake of sweets and other eatables prepared for the occasion. This ceremony is performed only in the case of the first pregnancy.

We can now describe the various ceremonies which are performed after the birth of the child.

3. JATA KARMA CEREMONY. This ceremony is performed when the child is born.

4. NAMAKARANA CEREMONY. The child is named ten days after birth. This is a very important ceremony, since it gives identity to the newly-born child. All relatives, friends and persons living in the village are invited on this occasion to give their blessings to the child and good wishes to the parents.

5. ANNAPRASANA CEREMONY. This is performed in the sixth month. This is the first feeding of the baby with solid food. Transition from liquid diet to a solid diet is thus regarded as a very important step in the growth of the child.

6. CHUDĀKARMA CEREMONY. This is performed generally either in the first or in the third year. It refers to the removal of the hair. It is noteworthy that the first tonsure is looked upon as a significant stage in the growth of the child. In a broad way, this is the introduction of the child to the rules of bodily hygiene.

7. UPANAYANA CEREMONY. This is a very important ceremony usually performed in the eighth year of life. *Upanayana* is looked upon as the second birth of the child since he is now introduced to the sacred lore of the community. This is regarded as the child's cultural birth.

Generally there is also the ceremony of *Aksharābhyāsa* introducing the child to the alphabet. This is performed when the child is about five years, before sending him to school. However, it must be noted that this ceremony is not described in the *Grihyasūtras*. With the modern introduction of nursery school education, this ceremony is now being abandoned. It would be interesting to make a historical study of how and when this ceremony came to be introduced. Apparently it began when writing came into vogue.

After the *Upanayana*, the boy enters the *Brahmacharya Āshram*. According to ancient practice he goes to the *Gurukula*. He lives in the house of the teacher and learns the *Vedas* and the *Vedāngas*. This indicates that the ancient Indians realized that the proper time to start formal education was at about the age of eight. Generally, an individual was required to spend about 12 years in the house of the teacher to obtain a satisfactory amount of learning.

8. SAMAVARTANA RITE. This ceremony celebrates the return of the student to the home after his studies in the *Gurukula*.

9. VIVAHA CEREMONY *or* THE MARRIAGE CEREMONY. This marks the entry of the individual into the *grihastāshram*.

These *Grihyasūtras* describe the various ceremonies that should be performed from the moment of conception. They include many ceremonies after marriage and up to death. As far as we are concerned, these ceremonies indicate the awareness of various stages in the growth of an individual.

The Outlook on Treatment

One of the famous *subhāsitas* gives in a brief and telling way the method in which children should be looked after.

It says that in the first five years a child should be treated with extreme affection, *Lālayet*. In the next ten years, roughly from six to 16 years, he should be treated with strictness, *Tādayet*. There should be rigorous control and he may be punished whenever necessary, so that he conforms to the social norms. Finally, after his sixteenth year he should be treated as an equal and friend, *Mitravattu*. Thus this *subhāsita* deals with three types of treatment relevant to the three stages in the growth of an individual.

Other Practices

Before concluding, we might describe a few more stages that are noted in Indian families on the growth of the child. Mothers and grand-mothers are aware of the time at which the child achieves a control of his neck. This can be seen by the way in which the mother carries the baby and gives instructions to boys and girls who are eager to carry the baby. The whole family is happy when the child turns from back to front. This information is communicated to all relatives and visitors to the house. Satisfaction is shown and comments made about the baby's health as well as the growth of the child, when he sits up without support and when he crawls. One of the most thrilling days in the history of a family is the moment at which the child crosses the threshold. This 'threshold crossing moment' is celebrated by the breaking of a coconut and probably even by distribution of sweets to people who are there at the time.

Some Toys

Children's toys also indicate the awareness of the growth of a child. One of the first toys which are presented to the children even in villages is the wooden rattle which the child grasps with his hands and takes to the mouth. Similarly, there is another toy which is like a dumb-bell. But probably one of the most significant toys ever invented is the three-wheel cart (*Rehra*) which is given to the child when he is 16 or 18 months old so that he can push it and learn to walk and run steadily.

CONCLUSION

The rituals and the practices clearly show the awareness among the Indians of the significance of various stages of growth.

It would be interesting and useful if field investigations in urban as well as rural parts are conducted in the various states of India to find the rituals and practices that are being followed with respect to child growth.

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PART II

PHYSICAL AND MENTAL HEALTH IN CHILDREN

10

SOME ASPECTS OF COMMON DISEASES IN CHILDREN

S.T. Achar

> *'For every child, health protection from birth through adolescence; periodical health examinations; regular dental examinations; protective and preventive measures against communicable diseases; the insuring of pure nutritious food, pure milk and pure water....'*
>
> From THE CHILDREN'S CHARTER

INTRODUCTION

Children are easily susceptible to infectious and contagious diseases like diphtheria, whooping cough, measles, tuberculosis, etc., which were the scourges of childhood population in the European and North American countries till a few decades ago. They continue to be so in India. Parents and school teachers must know how to prevent these and how to detect them early.

Children suffer readily just as tender plants do from deprivation of essential nutriments. Thus, we see the havoc of malnutrition widespread among the children especially of the poorer classes in the underdeveloped countries in Asia and Africa. The unedifying spectacle of these puny babies and underweight-children stunted in growth is all too common among large sections of the population in these countries because protective foods like milk, eggs, meat or vegetable proteins do not reach the children of the poorer classes either because of the cost or through ignorance. In contrast, the children of the well-developed countries—even of the poorest sections—are, by and large, chubby and better built and the ravages of gross malnutrition so common in India, for example, are not seen except in rare instances there. Recently, lakhs of young men offered themselves for recruitment to the armed forces in response to the national call. However, only a small proportion—about a fourth—of these young men between the ages of 16 and 20 years were found to be up to the physical standards of height, weight, chest measurements and fitness required for admission to the army and the rest had to be rejected by the army recruiting medical officers.

This should open our eyes to the need for better nutrition from the early years of life onwards and for a frequent health check-up of pre-school and school children to detect minor defects and ailments before they assume major proportions or become irremediable. It is incumbent on all who come into contact with children to know the principles of nutrition in the growing child and the application of these principles in homes and institutions.

Many apparently trivial complaints like itch, skin sores, colds and sore eyes can cause much harm to the child if neglected and can easily spread to other children in school. Minor defects of hearing, vision, gait, stance or speech, ought to be recognized and remedied if possible in the early stages and before they develop too far.

'A healthy mind in a healthy body' is a well-known adage. Children's emotional and psychological reactions are different from those of adults and must be understood by parents and school teachers, to enable the individual child's mind to grow normally in a healthy manner, satisfying the child's basic emotional needs in the home, the school and among playmates at the different stages of his development.

Nowadays street and home accidents are becoming an increasing menace. In Western countries with the conquest of malnutrition and infectious disease, these are now the leading causes of death among children. And so it is that parents and school teachers must be educated on safety measures in the home and in the streets on the way to school.

Children can and should be taught many things in school apart from reading, writing and memorizing, e.g., sanitation by precept and provision of proper sanitary arrangements in the school, use of boiled water for drinking and proper dietary habits by incorporating protective foods in the midday school lunch programme. Cleanliness in the kitchen and dining hall and in the disposal of eating plates or leaves can all be inculcated in the school, besides sanitation in lavatories.

GROWTH AND DEVELOPMENT

Physical growth is judged by periodic height and weight measurements. Though tables have been prepared which give average weights and heights of children of different ages, it is to be remembered that there are thin, medium, stocky or over-weight types of build, and that it is more important to assess the progress in height and weight from time to time than to go by a single measurement and compare it with the average given in the standard table and report that the child is underweight. This is because a constitutionally thin child will be appreciably below the 'average' though healthy by all other criteria, and it has also to be remembered that the tables of height and weight usually referred to are prepared from data of well-developed countries where several decades of good nutrition have now resulted in taller and heavier children. It is to be remembered that complete evaluation of the growth and development of a child must take note of the firmness of his muscles, the colour of his lips and cheeks, his alertness, behaviour, etc., besides height and weight. There is a steady increase of height and weight from birth to adulthood, which comes to a stop between 16 and 20 years. This increase is most rapid in the first year of life but much less rapid in the second year, especially with regard to weight as compared to height. Hence it is not surprising that many children tend to look lanky by about two years, losing the chubbiness of early infancy. From the age of three or four years, the height increases at a slowly declining rate until puberty when a spurt occurs. Serial measurements of height and weight recorded on special charts are useful in revealing whether a child is digressing at some point from a pattern that he has been following and the significance of his deviation from the average. Rapid shifts in position often occur coincidentally with illness, but height is less affected by illness than weight. In dealing with children who appear too short, it must be remembered that there are wide variations as to when normal children attain their ultimate adult stature. Some may appear short for a long while but have a quick spurt at adolescence and attain average or even above-average height ultimately. A word about sufficient rest for children especially the young ones will not be out of place here. Over-activity in play or work is not good physically and mentally. Small children at school should be encouraged to rest flat for a while during the midday recess hour, even if they do not actually sleep.

Development is the acquisition of skills. Most children can walk by the age of 13 to 16 months and a few as late as 18 months. If walking has not been learnt by the time the baby is 20 to 24 months of age, the doctor must be consulted as to the cause of this delay. By about 18 months of age, he can use a spoon to feed himself without much spilling, if helped and given a chance to do so. He is imitative at this age. The finer movements of hands, fingers and feet develop later than those of the arms and legs. A common mistake is that of urging the use of pencils and other objects requiring fine finger coordination, before the child has become used to coordinating the coarser movements of arm and forearm, as, for instance, in putting on his shirt and coat. Toys must, therefore, be fitted to the normal progression of development giving a rattle first, later building bricks and only much later pencils for writing. Much clumsiness in writing and the common complaint of destructiveness can sometimes result from failure to fit the toys to the normal progression of development.

Usually babies begin to utter a few simple words like 'amma' (mother), 'appa' (father), 'thatha' (grandfather), by one year of age, and by two years of age should be able to make two or three word sentences. Delay in speaking beyond the second year may be due to many causes like parents not encouraging him to ask for things; giving objects to the child before he names them; or a hearing defect or even mental retardation. Learning to speak is dependent on hearing. Gross defects of hearing can usually be suspected when the baby around nine or ten months of age does not start or turn towards a loud noise.

Nutritional Requirements of Children

All human beings need food for energy even at rest (for the heart and lungs to work), food for replacement of wear and tear, various vitamins which take an essential part in the oxidation processes inside the body, minerals like iron, traces of copper, magnesium, sodium, potassium, etc. Foods can be divided into:

(*a*) energy-yielding foods, that is, foods having mostly carbohydrate-cereal foods like rice and wheat (cereals contain in addition some protein), roots and tubers like potatoes, sugar preparations, and fats like butter and oils.

(*b*) body-building foods, that is, foods rich in protein, as for example, milk, meat, fish, eggs, pulses and nuts. Children need a liberal supply of these because, unlike adults, they are in the process of growth.

(*c*) protective foods, that is, foods rich in vitamins and minerals like green leafy vegetables and fruits.

Children need more calories and more protein in proportion to their weight as compared to adults because of their growth and exuberant activity. Thus a child of five years weighing 20 kilos needs 1200 calories (60 calories per kilo) and at least two grams of protein per kilo, while a man doing moderate work needs only 3000 calories (50 calories per kilo) and 70 gram of protein (1.2 grams per kilo). On account of the growth spurt at puberty, there is increased need of calories and protein in the adolescent period. Hence the ravenous appetites of adolescents. For example, the 13-year old boy or girl weighing only 40 kilos needs as many calories as an adult of average weight (65 kilos) doing moderate work and with regard to protein even more.

OPTIMAL PROTEIN INTAKE. This is not only a question of the amount of protein but also (1) whether adequate calories from fat and carbohydrate are given in the same meal with protein to spare the latter for body-building—85 to 90% of total calories needed should come from the former. (2) if 'complete' proteins (that is milk and milk products, eggs, meat or fish) are not available, whether one incomplete protein is supplemented with incomplete protein from another source in the same meal, for example, cereals with pulses. Complete proteins (that is, those from animal sources) contain all the essential amino-acids in the proper proportion while incomplete proteins (that is, those from vegetable sources) are deficient in one or other essential amino-acids. For example, cereals are poor in lysine and methionine, while pulses are deficient in methionine and threonine, and maize is deficient in tryptophan. No doubt, milk is by far the best source of complete protein as it supplies, besides protein, other dietary essentials like calcium, vitamin A and vitamin B complex. Small amounts of complete protein have been proved in animal experiments to have a strong supplementary effect on incomplete proteins. When several vegetable proteins are taken (for example pulses, cereals and mixture of vegetables) the lack or deficiency of an amino acid in one protein is compensated for by its presence in another. Hence the importance of a good mixed diet for optimal growth, for example, cereals and milk, meat and vegetables given at the same time. In practical dietetics there is safety in mixtures.

FATS. Children will probably need more fat like butter, ghee or oils (about 20 to 30% of their total caloric need should come from fat) whereas in adults 15 to 20% of calories come from fat.

CALCIUM AND PHOSPHORUS. Because of growth which means the laying of calcium and phosphorus, children need these more. Milk and ragi are rich in them, but the phytin present in cereals, pulses and nuts interferes with the absorption of dietary calcium and iron. For this reason, some milk should preferably be given with cereal or ragi porridge.

IRON. Some iron is needed in the diet. All green leafy vegetables like tender amaranth, mint, spinach, and drumstick leaves are rich in this, as also tamarind pulp and liver and, to some extent mutton; but milk is very poor in iron. Iron deficiency anaemia is common (the child looks pale) in India, and hence a liberal amount of green leafy vegetables and occasionally liver should form part of the diet of every Indian child.

VITAMIN A. This is essential for all. The lack of it gives rise to dryness of the eye, night blindness and even ulceration of the eye with loss of vision. The deficiency is common among pre-school children of the poorer classes and can be avoided by giving foods rich in vitamin A, like butter, ghee, fish, liver, oils or by giving large amounts of carotene present in vegetable foods (carrots, green leafy vegetables) since the body can make vitamin A from carotene.

RIBOFLAVIN. The average Indian diet is deficient in this vitamin and the lack gives rise to fissuring at the angles of the mouth. Cereals, pulses and green leafy vegetables are important sources.

NICOTINIC ACID. Children largely on a maize or Bajra (cumbu) diet or millets tend to have a deficiency of this which may give rise to peculiar skin manifestations and can be prevented by giving some cereals like wheat or rice in the diet.

VITAMIN C. The requirement can be met by fruits and salads. The cheap amla and guava fruits are very rich in this.

VITAMIN D. The body obtains vitamin D from food (fish liver oils) and a little from milk and also manufactures from direct sunlight. Children who play in the sunshine get enough of this.

Ill-balanced diets are those which do not provide the minimum daily requirements of the various nutrients. Hence children on such diets are apt to suffer from various degrees of malnutrition or deficiency diseases and their physical efficiency will be low. The effects of such poor diets are given below:

Diet	*Manifestation*	*Remarks*
Insufficient calories in diet but otherwise balanced in protein, carbohydrate, fat.	Marked underweight for age, poor subcutaneous fat. Not vigorous.	Common
Sufficient or insufficient calories but low in protein (protein malnutrition)	Gross deficiency results in marked lethargy and apathy with swelling of the body, peculiar skin condition and hair changes, besides growth failure. Milder deficiency states result in retardation of growth, poor vigour, hair becoming lighter in colour and sparse and perhaps some baggy cheeks.	Gross forms common in pre-school children among the poorer community; mild forms very common.
Vitamin A deficiency	Night blindness, ulceration of eye	Common.
Vitamin A and essential oil deficiency	Toad or spiky skin over elbows and back	
Riboflavin deficiency	Angular stomatitis	Very common among children.
Vitamin C deficiency	Scurvy (bleeding gums, in infants bone changes)	
Vitamin D deficiency	Rickets (bending of bones—in infants and pre-school children)	
Iron deficiency	Anaemia	

As a simple guide, the amounts of foodstuffs recommended to form balanced diets for children and adolescent boys and girls are given on the following page.

BALANCED DIETS FOR CHILDREN*

(*Figures in ounces*[1] *per day*)

Foodstuff	3 to 4 years		5 to 6 years		7 to 8 years		9 to 10 years		11 to 12 years	
	V	NV	V	NV	V	NV	V	NV	V	NV
Cereals[2]	5	5	7	7	9	9	11	11	12	12
Pulses	1	1	1.5	1.5	2	2	2	2	2	2
Groundnut, roasted	—	—	—	—	1	1	2	1	2	1
Gingelly seeds (sesame)	0.5	0.5	0.5	0.5	1	1	1	1	1	1
Bengal gram, puffed	1	—	1	—	1	—	2	—	2	1
Milk and curds	20	12	15	8	15	8	15	8	15	8
Meat and fish	—	1	—	2	—	2	—	2	—	2
Eggs	—	1	—	1	—	1	—	1	—	1
Green leafy vegetables	1.5	1.5	2	2	3	3	3	3	3	3
Roots and tubers and other vegetables	1	1	1	1	2	2	4	4	5	5
Fruits	3	3	3	3	3	3	3	3	3	3
Oils and fats[3]	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	1
Sugar and jaggery	2	2	2	2	2	2	2	2	2	2

BALANCED DIET FOR ADOLESCENT BOYS AND GIRLS*

(*Figures in ounces*[1] *per day*)

Foodstuff	*BOYS*				*GIRLS*			
	13 to 16		17 to 21		13 to 16		17 to 21	
	V	NV	V	NV	V	NV	V	NV
Cereals[2]	15	15	18	18	14	14	15	15
Pulses	3	2	3	2	3	2	3	2
Groundnut, roasted	2	1	2	1	2	1	2	1
Bengal gram, puffed	1	—	1	—	1	—	1	—
Milk and curds	10	5	10	5	10	5	10	5
Meat and fish	—	2	—	2	—	2	—	2
Eggs	—	1	—	1	—	1	—	1
Green leafy vegetables	4	4	4	4	4	4	4	4
Roots and tubers	4	4	4	4	4	4	4	4
Other vegetables	4	4	4	4	4	4	4	4
Fruits	4	4	4	4	4	4	4	4
Oils and fats[3]	2	2	2	2	2	2	2	2
Sugar and jaggery	2	2	2	2	2	2	2	2

V=Vegetarian NV=Non-vegetarian

1. One ounce=28.4 grams
2. Cereals might with advantage include four ounces of ragi—a millet rich in calcium.
3. Half the quantity of oils and fats as butter and ghee.

Important Note:—Coffee and tea have no nourishment value apart from the sugar and little milk that may be there: they often reduce appetite in children temporarily and so should not be encouraged in them, though adults take them as stimulants or as refreshing beverages.

*Tables adapted from the book *Our Food* by Swaminathan and Bhagavan.

SCHOOL LUNCH

The object of a school lunch programme should be not merely to satisfy hunger but also to offset gross deficiencies in the home dietaries of children and to inculcate proper dietary habits. Instead of blindly following the traditional or customary diet, modifications dictated by recent researches could be attempted, e.g., replacement of part of the rice by wheat, using different cereals on different days, the liberal use of pulses and cheap, locally available green leafy vegetables, the use of butter milk (fermented milk), etc.

Suggested School Lunch Menus

In North India:

- Missi Roti made of wheat flour, Bengal gram flour, green leaves with some oil, onions and green chillies.
- Chapatie or roti made of maize, bajra, jowar or ragi flour, or,
- Wheat or ragi porridge with one of the following:
  - Vadian Curry (made of fermented gram, potatoes and oil)
  - Green leafy vegetable Bhurjee (made of spinach or other leaves and potatoes cooked)
  - Raita (potato curd)
  - Cooked dhal with green leafy vegetables
  - Khamun Dhokla (Bengal gram flour fermented in butter milk and steam cooked)
  - Aalu chole (white gram and potatoes)

In South India:

- Wheat porridge, wheat pulse porridge
- Wheat-pulse 'laddus'
- Idli, rawa-idli made of suji and a little gram
- Idiappam made of wheat or Bengal gram and rice flour
- Pongal (rice and green gram dhal)
- Wheat uppuma
- Paniaram (fermented rice and black gram dhal) with jaggery, with one of the following:
  - Sundal (cooked gram)
  - Vadai
  - Tapioca-fish curry or Tapioca-fish cutlets or puffs
  - Salted biscuits made of wheat, gram and ground-nut powder.

Many North Indian menus can also be adapted in the south with advantage, and *vice-versa.*

Low-cost Recipes for Midday School Lunches

MISSI ROTI. Knead four ounces wheat flour and three ounces Bengal gram flour with eight ounces fenugreek or soya leaves with added onions, chillies and water, into a dough, make into chapaties and place on hot iron plate with a little oil.

WHEAT-PULSE PORRIDGE. Three ounces of broken wheat are roasted in a pan, one ounce of green gram and 24 ounces of water added, cooked and jaggery with water added during cooking. Hot milk or butter milk is added.

WHEAT-PULSE 'LADDUS'. One ounce each of roasted Bengal gram flour and roasted wheat flour are mixed with half an ounce of jaggery with water or milk as binder and made into balls.

PANIARAM. Three ounces of rice and one ounce of black gram dhal are soaked overnight separately, ground, kept for fermentation for five hours thereafter. Then the two are mixed and made into a thin dough and fried in small portions.

VADIAN CURRY. 'Vadian' is prepared by soaking black or green gram dhal overnight, ground and fermented for 24 hours; then dried in the sun in small portions and stored. One ounce of this 'vadian' is fried in oil and added to fried potatoes and cumin and cooked till soft with a little gravy. Salt, turmeric and some 'garam masala' added.

KHAMUN DHOKLA. Bengal gram dhal flour is soaked in butter-milk and left to ferment for 24 hours; salt, turmeric, chopped green chillies and ginger are added to above and steamed to set. Mustard seeds, asafoetida and coriander leaves are fried in oil and poured over this steamed stuff and the Dhokla is cut into small bits.

COMMUNICABLE DISEASES OF CHILDHOOD

Children are readily susceptible to many infections:

- — Eruptive fevers, e.g., small pox, measles, chicken pox;
- — Mumps, poliomyelitis, typhoid fever;
- — Diphtheria, whooping cough;
- — Tuberculosis;
- — Colds, conjunctivitis, sore throat;
- — Minor skin infections, e.g., scabies or itch, ringworm, impetigo, etc.

In turn, they can readily infect other children in the school or at home. Many of the diseases that children suffer from like measles, whooping cough, etc. are most contagious at the onset when symptoms are not typical as, for example, in whooping cough before the whoop actually appears, and in measles before the rash appears.

Therefore, a child with catarrhal symptoms or fever should be isolated from others. Even if the symptoms are mild, the child should not be sent to school as he can easily infect the other children. It is also important to inform a doctor if an infant or a child has been exposed to a communicable disease. There are medicines now available which can prevent or modify some of these diseases when administered in the early stages.

Fevers with Rash

These are small pox, chicken pox and measles.

SMALL POX. This is entirely preventable by vaccination and re-vaccination. Unfortunately, it still occurs in India now and then in epidemic form since the people here do not bother to get themselves re-vaccinated at regular intervals and some children manage to escape it altogether. The first or primary vaccination which is normally done when the child is six months old, confers protection for some years and should be followed by re-vaccination when the child is four or five years of age and repeated from time to time when there is an epidemic or cases in the neighbourhood and even otherwise. Some parents are still afraid to get their children vaccinated on account of the moderate fever which sets in four or five days after the first vaccination and lasts for a couple of days (but not during subsequent vaccinations). There is also a local reaction at the site in the form of redness, swelling, formation of a little fluid and healing by scab formation. But the first vaccination is not considered successful unless it is accompanied by these reactions. On account of the real risk of infection and its grave consequences, especially for an unvaccinated child or adult, resulting sometimes in deaths and often in terrible disfigurement of the body, including loss of vision when the eruption occurs in the eye, parents should think twice before they refuse or postpone vaccination for their children. It is advisable to vaccinate babies when they are three to six months old, since the reaction is minimized in the younger age groups. However, it can be postponed temporarily if the child is unwell or is suffering from some skin disease.

The rash in smallpox appears after two or three days of fever. It is first seen on the face as small raised pimples slightly reddish. Later it appears on the limbs but is usually sparse on the chest and back. These spots become filled with fluid in a few days becoming turbid due to pus and finally heal by crust formation. In severe cases, these spots may join together instead of remaining separate. There are also other severe symptoms. The child with smallpox should be isolated till the doctor permits mingling with others.

CHICKEN POX. This is due to a different germ, though the eruption resembles smallpox. Vaccination is of no avail against chicken pox. There are no scientific methods of protecting against this disease and isolation is the only way of preventing others from catching the infection. Fortunately, the disease is mild.

MEASLES. This is an extremely infectious disease which starts with all the symptoms of an ordinary cold and fever with running nose, watery eyes, cough and fever. The rash usually appears on the fourth day, and the fever reaches its peak just before the rash but quickly subsides thereafter. The rash takes the form of reddish, slightly raised blotches appearing first on the face and spreading to the chest and limbs. Unlike smallpox and chicken pox, the fluid does not collect in these spots which quickly fade away in five or six days, without leaving any marks or scars.

The disease can be prevented by isolating the child when he has a cold or fever with watering eyes as it is most infectious in the early stages before the rash appears. However, if the child is known to have been exposed to infection, you can either leave it alone hoping that the disease would be mild or if the child is sickly, weak or recovering from any other illness, your doctor may decide to prevent temporarily or modify the attack by injecting gamma globulin (which is a fraction of the human blood) if available. Measles is dangerous as it may lead to pneumonia and also to inflammation of the ear. But these can be prevented and cured. Unfortunately in India, there seems to be a widespread belief that diseases like smallpox, chicken pox and measles are best left wholly untreated. In measles, at any rate, this attitude certainly means taking a risk, sometimes a big risk.

MUMPS. The chief symptom of this disease is a swelling of one or both of the salivary glands below and in front of the ears. There is usually fever and pain on chewing or swallowing. The disease lasts for about ten days. It cannot be prevented by vaccine or serum. However, the child should be isolated for ten days after the swelling appears.

TYPHOID FEVER. This is a prolonged, prostrating disease caused by a germ. Infection is either direct from actual cases, or through people who have had the disease and still carry the germs which are excreted in their stools or urine. Such people are called human carriers of the disease when they cook or handle food, the germs which are lodged in their finger nails during ablutions get into the food that is served or cooked and thus infect others. Flies also spread infection by alighting on faeces containing typhoid germs and then sitting on food kept uncovered in the kitchen or on sweets and other edibles sold by hawkers in the streets. Ice-cream is also sometimes contaminated if the milk is not boiled properly or the sugar has been kept exposed to flies.

Unfortunately, this disease seems to be widely prevalent in India. The situation was nearly as bad in Western countries 50 years back, but now owing to improved sanitary habits and prompt detection and isolation of human carriers, the disease has been practically eliminated there. Injection of typhoid vaccine is a good preventive measure if repeated every year or whenever there are epidemics.

Typhoid is suspected when fever without any accompanying symptoms like a cold or a rash and without any local cause like an abscess persists for several days and the diagnosis is confirmed by certain blood tests. If the child is being nursed at home certain precautions must be taken to prevent the infection from spreading to others. As already observed, the stools and urine of a typhoid patient are the chief sources of infection and, therefore, these should be collected in a bed pan or pot to which a strong solution of phenyle or any other effective disinfectant should be immediately added on the advice of the doctor and the excreta thrown into the flush or otherwise disposed of in a manner that makes it inaccessible to flies. The person handling the child or the bed pan should keep his or her hands scrupulously clean by washing them with soap and water and dipping them in lotion each time. Everybody in the house must be given preventive inoculation early. In the past, the diet was very much restricted but nowadays doctors are more liberal and allow semi-solid food like rice *conjee* besides milk and egg flip.

POLIOMYELITIS OR INFANTILE PARALYSIS. This is a short illness of ague fever followed by paralysis of some of the muscles in the body with the result that the child is found unable to use one or both arms or legs or some individual muscles. This paralysis may slowly clear up in the course of weeks or months. The extent of recovery of the paralysed muscles is unpredictable and is not influenced by any medicine so far. Exercises and massage, as prescribed by a competent medical person after the acute stage is over, help recovery. This disease has attracted much attention in Europe and U.S.A. and has occurred in epidemic forms in recent years in India too. Recently a vaccine has been made available for prevention of this disease. This achievement ranks as one of the wonders of modern medical science. The germ, which is very tiny and cannot be seen under an ordinary microscope can be made to multiply in some of the internal organs of the Indian monkey and treated in such a way as to make it harmless when injected or administered to the human; the body then produces an antidote to this germ.

SORE THROAT AND TONSILLITIS. Sore throat or pharyngitis is very common in babies and children. Various bacteria and viruses cause inflammation of throat and tonsils with either mild fever or sometimes high fever.

The tonsils and adenoids are part of the lymphatic tissue of the throat and back of the nose and normally grow rapidly during middle childhood.

They are, so to say, the gate keepers, catching bad germs and dealing with them locally. It is only when repeated infections have rendered the tonsils useless for this purpose and made them a reservoir of bad germs and their products or when infection has passed beyond tonsils and adenoids or when they are obstructing breathing, that removal is indicated.

Sore throat and inflammation of the tonsils are liable to frequently recurring relapses and result in various adverse effects on the child, who will suffer from the toxins recurrently liberated into his system from the germs multiplying in the throat. Low-grade fever, irritability, sleeplessness, loss of appetite, fatigue and poor progress in school are some of these general effects. The local symptoms of chronic throat conditions are difficulty in breathing through the nose giving 'adenoid facies', persistent cold, nasal twang in the speech and slight enlargement of the neck glands.

Ears and air sinuses connected with the nose are often also involved because of their proximity and connections with the throat. The child becomes sensitive to changes in air temperature, humidity, wind and other changing meteorological conditions.

It is also known that chronic inflamed conditions of the throat, nose and air sinuses connected with the nose are conducive to the development of recurrent cough with asthma and aggravate the course of bronchial asthma when associated with it.

Perhaps the biggest danger from throat infections lies in the fact that they sometimes provoke the onset of rheumatism—a disease whose chief danger is that it cripples the heart though its main symptoms are just joint pains and fever. Another remote effect of sore throat is the liability to inflammation of the kidneys manifested by swelling of the face and albumin in the urine.

Occasionally a 'sore throat' may be due to diphtheria germs which then is a serious condition producing a white patch over the tonsils and throat. The symptoms may be mild to start with but if not diagnosed in time, the toxins from these germs can affect the heart or the membrane may spread from the tonsils to the windpipe obstructing breathing. Hence it is important that every sore throat be examined by a doctor especially in a child who has not been immunized against diphtheria.

WHOOPING COUGH may not have the typical 'whoop' in the first week of onset but only ordinary cough, nevertheless the child at this stage is more infectious than after the typical whoop has developed. It is necessary to isolate a child with cough, especially if it tends to come in paroxysms, to prevent other children being infected.

ALLERGIC COLDS are also common in children, allergy being responsible for a good proportion of these 'frequent colds'. If the nasal discharge does not proceed to the thick purulent stage, an allergic basis is likely (i.e., sensitization to house dust, pollen from grass, etc.). Paroxysmal sneezing attacks during the season of pollen prevalence coming on most commonly on awakening and during the early morning hours are most certainly allergic in origin. In mild cases of this allergy, stuffiness and itching of the nose may sometimes be the sole complaint; in others, in addition to the sneezing, there is discharge of a profuse thin watery mucoid material which can become thick and pus-like if there is superimposed bacterial infection.

In a third of these allergic children, *asthma*, that is, paroxysms of acute difficulty in breathing, with wheezing and cough, is present. One of the steps in the management of these children is to remove the child from such surroundings or clear the surroundings of the offending pollen, which is not always feasible. Sometimes asthma occurs in children without allergic colds. There is a tendency for asthma in children to subside at puberty but some cases continue throughout life. Much can be done to prevent attacks and mitigate them when they do come. If one is able to identify the causative antigens and remove them or desensitize the child, then attacks could be prevented. Also respiratory infections should be avoided as far as possible and treated promptly when they do occur.

TETANUS is a severe disease caused by a special microbe which is often prevalent in the intestinal tract of herbivorous animals and sometimes of man and is hence found widely in soil which gets polluted by human and animal excreta. The bacillus gains entrance through a wound or raw surface. This may be the most trivial scratch or insect bite where the wound is not apparent, but the injuries most likely to lead to tetanus are deep puncture wounds (nail or thorn into the sole of the foot) and crushing wounds and burns. This serious disease can, however, be prevented by (1) prevention of injuries, (2) thorough cleansing of wounds when they occur, (3) giving every child a course of anti-tetanus toxoid injections—this is mandatory for every child because invariably children have falls or scratches or thorn pricks in the course of their daily activities, (4) a booster injection after a wound is also necessary but need not be repeated for some months more.

Infectious Skin Diseases

SCABIES. This is what is called 'itch' and is very common among children. It is due to a small insect called the itch-mite which burrows just under the skin and is too tiny to be seen by the naked eye but can be seen under the microscope. There is intense itching, worse at night, and there are groups of pimples topped with scabs and scratch marks from constant itching. These pimples and scabs are found chiefly over the wrists, in the webs between the fingers, and the genital area. Sometimes pus may form due to pus-producing germs being implanted during the scratching. This disease quickly and easily spreads from person to person by personal contact and from clothing or bedding. A child with scabies should not be sent to school till he is free from this disease. It can be eradicated within a few days by suitable treatment. But it is important to remember that all other members of the family must be carefully examined for evidences of itch and treated, because when one child in a family has this disease, the chances are that many members of the family would have got it by contact, and *vice versa*. Children in school with scabies must be isolated from contact with others till treatment is completed and cure effected.

RINGWORM. This is caused by various types of fungi. On the body, round areas appear with a fine scale and a slightly raised border and there is itching. When the head is affected there may be red areas with scaling and the hairs in that region will be brittle, broken, short and can be pulled out easily. The disease spreads from child to child by contact and by transfer from the fingers which have been scratching these areas. But with treatment, a cure can be expected in a short time.

IMPETIGO. Small blisters containing pus form on a red base and after bursting, form yellow-crusted sores. Fresh ones appear in the neighbourhood of the old ones and increase in size. The skin lesions occur on the face, legs, and many other areas because the hands carry the germs from the infected place to other areas during scratching. Other children should not be allowed to come in contact with the infected child or his clothes, bedding and towels, as the germs can be transferred; the doctor must be consulted without delay. Neglect is responsible for many children being chronically ill with sores, spreading the disease to others. Some children with impetigo develop a serious complication, namely inflammation of the kidneys, due to the germ passing from the sores to the kidneys. Impetigo is quite common and contagious.

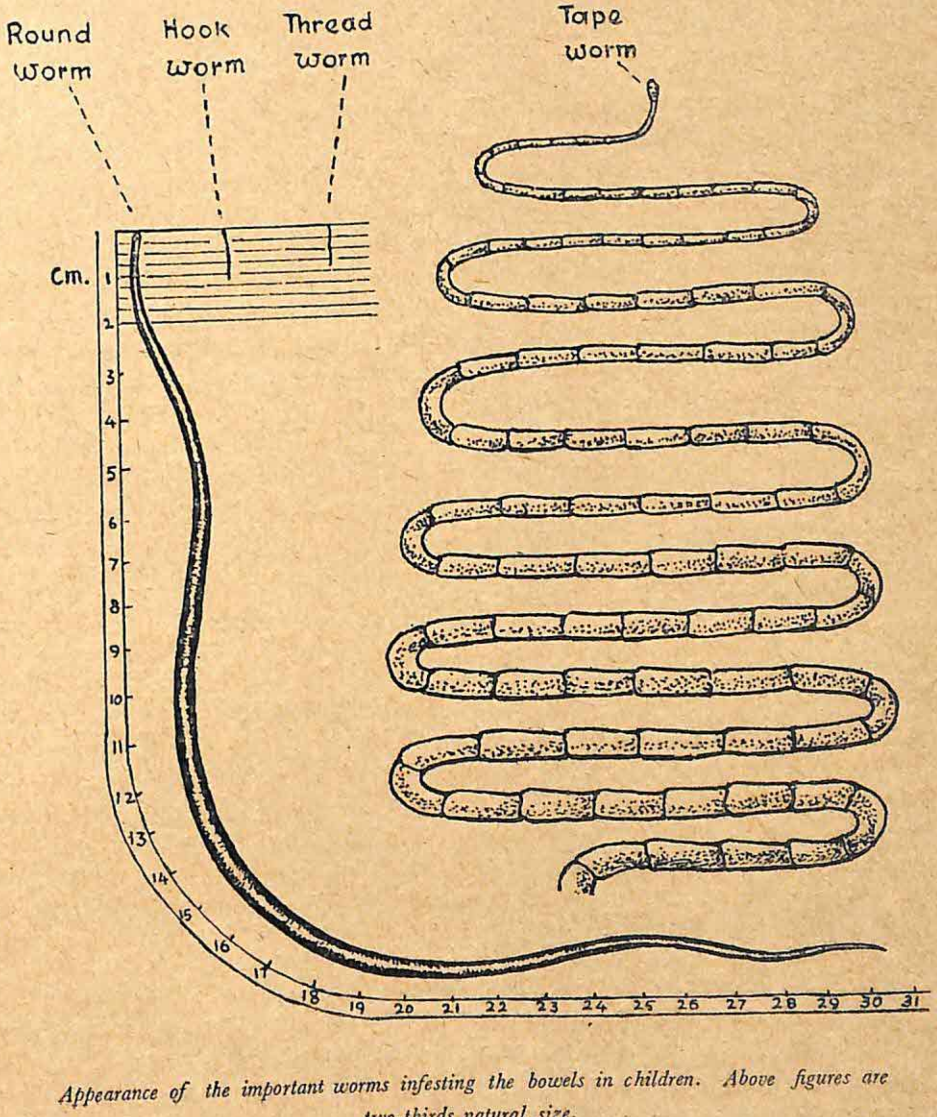
LEPROSY IN CHILDHOOD. This is due to an infection with the leprosy germs which gain entrance through the skin by close and prolonged contact of the child with an adult who has leprosy. It is not yet realized by the lay public how common leprosy is in some parts of India, especially in South India. It takes years before the coarse and big nodules, or the disfigurement that is seen in some of the adult can develop. Such disfigurement is not seen in children who have contracted this disease; only patches of light coloured coppery and red areas, with perhaps some thickening of the skin, develop; the face is a favourite site. No non-itchy skin patch must be neglected but must be shown to a doctor. The fear and social stigma attached to this disease must be shed. The germs could be picked up from an attendant who is constantly carrying the child, or from an unsuspected member in the household. The child's skin is especially delicate and vulnerable to these germs and the disease often starts unsuspectingly in childhood. In the prevention of this disease, there are two important things that a parent can do. First, if any member of the household has leprosy, the child must not sleep or come into close contact with that person. Second, in employing servants to look after the child, have them examined thoroughly by a doctor to make sure that there is no leprosy.

Worms

The common worms which infest the bowels of children are the round worms which are brownish and long varying from 15 to 30 cm. and as thick as a slate pencil; the tape worms which are white and tape like, the full length of which is very long (two to three meters) though only two or three small segments each about half to one-and-a-half centimeters long are passed in stools now and then; the thread worm which is small (about three-quarters cm. long) and thread like; and the hook worm which is also small (about one-and-a-quarter cm.) and white. The figure on the following page depicts the common worms.

ROUND WORMS look like slim earthworms without segments. Passing a worm of this size may frighten a child but it need not cause such alarm. Infection of the child takes place by swallowing the developed eggs of these worms, the development of which takes about a month in the soil or water after the eggs are passed out of the human body in the stools contaminating the earth or water. Children get infected by eating food or water contaminated with such developed eggs. It takes about eight weeks for the larvae to grow into mature worms in the intestines from the day the eggs are swallowed by a child. The number of worms infesting a child may vary from one to dozens or even a hundred or more. A few worms may cause no symptoms at all and are often discovered accidentally by routine microscopic examination of stools or by fortuitous discovery of a worm passed in motion, or there may be vague pains in the abdomen, loss of appetite, and inclination to vomit. Rarely worms may entwine and obstruct bowel which becomes a serious matter—fortunately rare. Sometimes these worms may wander up and creep out of the nose especially during fever—an embarassing rather than a serious situation. There are commonly prevalent beliefs that worms are responsible for nervous habits of children or grinding of teeth but such beliefs have no scientific basis and one is not definite that worms even when present contribute to these nervous symptoms. Round worm infestation can be prevented by proper sanitary arrangements with regard to faeces, thorough washing and cooking of contaminated vegetables or other foods and provision of boiled drinking water.

HOOK WORMS. Infestation occurs among people walking barefooted in the fields and open ground polluted by night soil containing these eggs. The larvae develop in the soil and burrow the skin of the bare feet and enter the bowels finally and develop into small worms which suck blood and cause anaemia.



Appearance of the important worms infesting the bowels in children. Above figures are two-thirds natural size.

THREAD WORMS. This is very common and children of all social classes are affected. The female worm crawls to the anus to lay eggs on the skin round the anus. The irritation caused by the small worms over the anus results in scratching and infection of the child's hand and nails with eggs which are then ready to infect other children or the same child again when these eggs on hand and nails are put into the mouth. Infested children pass the eggs on to their playmates through the finger nails. Since bed clothes are also infected by these eggs, prevention includes frequent laundering of night clothes besides treatment of infected children and cutting the finger nails short.

TAPE WORMS, flat, segmented and whitish are recognized when segments of the worm are passed in stools. Infection occurs by eating infected pork or beef not properly cooked. Symptoms are vague and mild.

STOMACH-ACHE is rather common in children and may be due to trivial causes such as the taking of indigestible articles like unripe fruit, or it is sometimes brought by worms especially the round worms or it can be due to serious causes like inflammation of appendix (when it is usually accompanied by fever), dysentery, etc. A child with abdominal pain should be seen by a doctor.

FITS OR SEIZURES OR CONVULSIONS

Fits occur occasionally in some children. The common type of fit is where the child with or without a warning symptom (like a cry) loses consciousness, perhaps falls, becomes stiff and has shaking movements of all the limbs and twitchings of the face with perhaps some frothing at the mouth lasting a couple of minutes or more followed by a stupor for some time, and then gets up dazed not remembering anything. This is alarming to onlookers, but all that needs to be done during the fits is to put the child flat on the ground, or table, unbutton the collar of his shirt and coat, so that there is no pressure on the neck and put the handle of a teaspoon or a blunt thing like a stick between the teeth to prevent the tongue being bitten during the violent movement and clenching of the jaws. Such fits—which are called major epileptic fits—can be prevented from recurring by suitable daily medication prescribed by the doctor, which must be given daily for a long time even when there is complete freedom from fits for months.

There are other varieties of fits called Epilepsy Minor (*petit mal*) which may take the form of (*a*) simple vacant staring spells with momentary loss of consciousness and quick recovery, or (*b*) falling limp to the ground without jerking of the body and without appreciable loss of consciousness, or (*c*) just involuntary shock like jerking of the muscles of a limb.

Lastly, the school teacher must also remember another variety which can cause confusion, namely, the psychomotor seizures where the child's behaviour changes for a short while (for example staring or frightened look or rage) unexplainably along with automatic or purposeful but inappropriate acts only to regain his normal self after a while. For example, a school boy of nine years in the author's care, otherwise quiet and well-behaved, would suddenly fly into an uncontrollable rage with his classmates and pace up and down the room for a while in a confused manner only to calm down and be his normal self after about half-an-hour. When this was finally proved to be due to a kind of epileptic storm in his brain (psychomotor seizure) and treated by appropriate medicines, there were no recurrences and he is now developing and progressing like a normal school boy.

MISCELLANEOUS CONDITIONS

BED-WETTING. Ordinarily a child stops passing urine in the bed after about three years of age (or earlier with some training). The optimal time for beginning bladder training in most children is between 15 months and two years of age. This training should be non-coercive and gradual.

Causes of bed-wetting are to be found either in faulty training (no training or sometimes even too early training), emotional disturbances (the most common cause) or rarely physical disease. Among the emotional disturbances, disturbed parent-child relationship is an important one. When this relationship is healthy and warm, the child will train himself so to say. The birth of a brother or sister, moving to a new home, separation from parents by illness or entering school may precipitate bed-wetting after control has been established. This is to be ascribed to a temporary lack of security within the child. Rigorous efforts to check thumb and finger sucking or masturbation may also bring it on—all this indicating that measures should be designed to foster the child's sense of security in the family group.

Treatment of bed-wetting is often slow and difficult. The approach must be to help the parents in understanding and improving their relationship with the child and at the same time to offer to the child some aid to complement his own efforts. Scolding, punishing and shaming the child only make it more difficult for him to control urination. Patience, build-up of the child's self-confidence and desire to be dry, limitation of fluid intake especially at night, and various medicines may be useful. Often a child guidance clinic or a child psychiatrist can help the child and parents.

STAMMERING. A number of factors singly or in combination may result in stammering—for example, a constitutionally nervous child suddenly finding himself separated from his mother and put into a school he dislikes may develop a stammer. It is also believed that the forced use of the right hand in a left-handed child may sometimes be a contributory factor. In some cases, it is clearly imitative or familial. In treating stammering, the most important thing is to see that the child does not become conscious of it. The general health of the child is important as fatigue and ill-health generally upset nervous children. Frequent rest-periods are necessary for such children. A good steady routine is important. Teaching dancing gives the child a sense of rhythm which may be helpful for the speech also. It is advisable to determine which hand is truly dominant and to encourage the child to use this hand in preference to the other. Speech-training by one well-versed in this helps a lot.

DEAFNESS. There is a high incidence of partial deafness among school children which has been estimated to be about 75 per 1000 in Great Britain. A rough classification by degree is into (1) those who can hear the human voice and in whom the speech will be acquired by itself though perhaps imperfectly—these are labelled 'children *hard of hearing*'; (2) those who can only hear amplified sound but not ordinary sound—'*the partially deaf*'—these can develop speech after improving the hearing in time by accoustic aids; (3) those who are so deaf that they cannot appreciate sound at all and hardly appreciate amplified sound; speech cannot be acquired spontaneously when the condition dates from infancy and they will be '*deaf-mutes*'; education in these has to be by lip-reading, touch and by such other methods.

There are many causes for deafness, the most important, from the point of view of prevention and treatment, is chronic ear discharge. But in a large number of cases, deafness is due to causes operating before birth, that is, congenital causes. For practical purposes, congenital deafness and deafness acquired during infancy will have the same effect, namely, interference with acquiring speech.

The profoundly deaf child will always require special training in deaf and dumb school but it may be possible to educate the hard-of-hearing child in the ordinary school by seating him in the front row and the partially-deaf child by providing him with accoustic aid. Detection of the degree of milder hearing defects in the school-age child is best done by audiometer. But in a pre-school child whose co-operation is limited, tests are difficult. The possibility of a hearing loss must be kept in mind in any child who develops unintelligible speech.

EYE TROUBLES. 'Sore eyes' are common in children, but there are other causes of redness of eyes, for example, foreign bodies beneath the lid and allergic disturbance in the eye which tends to occur in warm weather.

Injuries to the eyes of children are common. While small abrasions and superficial foreign bodies causing acute pain prompt the parents to consult a doctor immediately, injuries which do not cause much pain or sensitivity to light tend to be ignored until late with disastrous consequences. 'Black eye' by itself is usually of no great importance except when the eyeball is involved.

READING HABITS. Children should be encouraged to read in a good light (100 to 150 watts) which comes from behind and does not produce reflected glare. The print should not be too small and the material should be held tilted (to prevent reflection from glossy paper) at least 14 inches from the eye. Good posture while reading should be insisted upon.

TESTS OF VISUAL ACUITY can be accomplished after four years of age by the use of a Smellen E chart consisting of rows of letter E in various sizes. Children with short sight (myopia) find difficulty in reading written matter on the blackboard from the back benches. There is poor vision for distant objects. Colour blindness can be tested by the use of coloured wools.

SQUINT (CROSS EYE). Deviation of the eyes is important both for its effects on vision (poor vision from disuse) and even more because gross forms cause adverse comment from school-mates with resultant psychological problems in the child. Exercises for the muscles of the eye, glasses, even operative treatment for those who do not respond to exercises or wearing of glasses are variously prescribed by the eye specialists for such cases.

BOW LEG AND KNOCK KNEES. These are usually congenital developmental variants of the normal. If acquired, troubles like rickets can be ruled out. To some extent, they will be corrected by growth within the limits of the hereditary pattern.but wedges in the shoes have no effect on bow leg or knock knee.

FLAT FOOT. The inner arch of the sole of the foot is not as high as it should be. In most children, it is not really an abnormality but it is as well to have an orthopaedic doctor examine the child.

FOOT STRAIN. Occasionally a child will complain of pain or fatigue in the feet after play. Foot strain is the usual cause of such complaints and exercises to improve the tone of the muscles supporting the foot are indicated—like walking tip-toe for five minutes daily.

TUBERCULOSIS OF THE SPINE OR HIP. A child developing slight lameness or stiff back or pain in the back should be referred to a doctor because such are the early symptoms of tuberculosis affecting the hip or spine.

11

BEHAVIOUR PROBLEMS OF CHILDREN AND PROBLEMS OF THE EXCEPTIONAL CHILD

Rajalakshmi Varma

1. BEHAVIOUR PROBLEMS OF CHILDREN

Man is a psycho-social animal. He has developed certain social needs such as needs for social approval, social living and social assimilation which far outweigh his biological needs for food and shelter. Every act of behaviour describes its meaning, purpose and end in a social manner, without which it is meaningless. Dependent as human behaviour is on social environment, conformity becomes indispensable. So much does conforming, adaptive and familiar behaviour ease life in society that it is clear that any variation in this must be looked down upon and termed abnormal, not only by others but by the individual himself. Thus, what is abnormal or a behaviour problem, is nothing but a deviation from the accepted pattern of behaviour on the part of the individual in a society. From this follows the fact that abnormal behaviour also varies from society to society just as normal behaviour does.

Traditional Views

So interwoven was individual life with collective life in the simpler societies that even the slightest deviation was viewed as radically abnormal. So limited was the simpler man's dictionary of causal elements that abnormal behaviour was always considered to be caused by the wrath of demons or by the black magic enemies. As a corollary, only coercive, magical methods of the Shaman or the 'Manthravādin' could cure the malady, and the process of therapy invariably involved the use of broomsticks and cudgels.

Hereditary and Constitutional Factors

The wave of scientific knowledge starting from the Renaissance and continuing in the wake of palmistry, graphology, characterology, phrenology and the humanistic work of Pinel, Itard and Segwin, created a welcome change in the approach to behaviour problems. Increasing stress on the role of hereditary and constitutional factors led to the view that problem behaviour is transmitted through families (Goddard, 14). This view that a deviant child is so born owing to the sins of his ancestors, changed society's attitude to him from coercive violence, to one of sympathetic negligence.

Mental Hygiene Movement

A further step in the revolution was brought about by Clifford Beers (3) who showed the possibility of a lost mind finding itself again, thus indicating the fact that abnormal behaviour is not always inherited but is often shaped by milieu. The mental hygiene movement which started with this assumption proceeded to show the role of the environment in the development of behaviour problems, their reactive nature and the possibility of their eradication through a change in the man.

Behaviourism

The newly recognized fact of environment's role reached fantastic heights in the hands of Watson (43), to whom abnormal behaviour, like all behaviour, is entirely a reaction to the environment, constitutional or innate factors having nothing much to do with the matter. Based on his classical observations of infants, he put forth a hypothesis that all abnormal behaviour was a result of faulty conditioning. It is true that some symptoms of abnormal behaviour are explicable on the basis of faulty conditioning, but it is a far cry from this to the postulation that faulty conditioning is the sole explanatory principle of behaviour disorders. Watson neglected the purposive, volitional and individual nature of behaviour disorders and this fact makes his system impracticable in a large number of behaviour problems.

Psychoanalysis

The psychoanalytic theory postulates that behaviour disorders are often devious solutions in the symbolic manner of conflicts between pleasure-seeking urges which have their roots in the unconscious impulses of the Id and the repressive forces of the Ego, and at later stages the dictates of the Super-ego or internalized society. During the time of psycho-sexual development of the child through the oral, anal, phallic and finally genital stages, if the child is over-stimulated, under-stimulated or confronted by a traumatic experience at a particular stage of development, it tends to fixate the developmental process or to leave a tendency for the ongoing development to regress to an earlier level. Thus fixation and regression resulting from an ineffective repression provide the basic soil for deviant behaviour. To this is added the contribution of the super-ego in the form of guilt feelings. According to Freud (8, 9, 10) the roots of deviant behaviour often lie in the deep past and all deviant behaviour is nothing but a blind repetition of some unfortunate past. Though it is true that psychoanalytic theory has thrown a great deal of light on the purposive nature of behaviour problems, its undue emphasis on sex as the only spring of behaviour problems, its slavish adherence to a biological orientation and the maze of libidinal development have made it mechanistic, in spite of the avowed dynamic approach of the system. Hence, it is only to be expected that subsequent approaches should seize on these Freudian postulates.

Individual Psychology

To Alfred Adler (2) who is, perhaps, to a large extent guilty of the same error of unilateralism as Freud, behaviour disorders (also normal behaviour) originate from an attempt to make up inferiorities actually existing or felt, imagined or suggested by others. It is, perhaps, inevitable that every child is born with a certain inferiority which he seizes as the pivot to build his life around and all his subsequent development is an attempt to make up this weakness. In thus planning his compensation, the individual is influenced by his early home environment, physical and social, and, thus influenced, moulds his style of life. To Adler, as to Freud, it is to defects in the formation of this style (early childhood character) that behaviour disorders must be traced.

Neo-Freudian School of Thought

The Neo-Freudians like Horney (18, 19, 20), Sullivan (39) and Fromm (11, 12) criticized the undue emphasis of orthodox psychoanalysis on psychological determinism, repetition-compulsion, sovereignty of the sex impulse with its fixed path of development and inherited psychic complexes. They take a more objective and behaviouristic approach to the problem. To them, behaviour disorders are the result of faulty habit formation caused mostly by poor inter-personal relations. Though the emphasis on the sociological implications is valuable and useful in the practical treatment of cases, an element of incompleteness is noticeable in the basic tenets of the Neo-Freudian system, in that it failed to throw any light on the ultimate, motivational structure of the individual. A tendency to reduce everything to a pattern of interpersonal relations leads to the neglect of the individual nature of behaviour disorders, and any approach which leaves the organism out of account is at best only half-true.

A THEORY OF BEHAVIOUR PROBLEMS

The point that emerges from this critical survey of the dominant views on behaviour disorders is that all of them are partially right and partially wrong.

The realization that the human organism is a functioning, active, dynamic whole, busily engaged in living in its life space, makes it obligatory to view behaviour disorders as socially deviant expressions of needs, motives and purposes, conscious and unconscious, present and past, of an organism eager to lead its life with the least possible resistance. An organism is no mere sum of a successive series of disconnected situations, nor is it a fossilized mass not pliable by situational processes. Thus deviant behaviour as well as normal behaviour are a psycho-socio-biological transaction in which it is not wise to overlook the role of either the organism with the biological and personal factors that go to make it up or the social environment, past and present.

Granting that behaviour, normal or abnormal, is a product of biological, personal-historic and social factors in interaction, it follows that investigations conducted on behaviour disorders in some parts of the world are poor mirrors of abnormal behaviour of a people far removed from those parts either geographically, socially or culturally. For instance, the social and cultural life in India presents a marked difference from that of the occidental peoples and, therefore, the studies conducted in the occident may not throw much light on the nature of behaviour disorders prevalent in India and their etiological factors.

Biological Factors

The human being is first and foremost a biological organism and his life is an unfolding of a biological cycle of birth, life and growth, uniform to some extent, at the same time stratified by some differences inherent in the biological process itself.

AGE FACTOR

The most important characteristic of the living biological organism is growth and changes connected with growth. Age has been a major factor of social expectations in normal societies. The individual is expected to behave and society is in turn expected to treat him according to his age. Consequent to these radical changes in him correlated with the process of growth, the needs, the obstacles, the ambitions, the temperament, all undergo changes and to this extent age affects the behaviour of an individual. A helpless infant grows into an obstinate, aggressive, negativistic pre-schooler and this unsocial pre-schooler becomes so socialized by the time he is eight or nine that he completely identifies himself with his gang of friends.

The psychoanalytic and the Neo-Freudian studies throw a great deal of light on this relationship between age and behaviour. Experimental studies on this relationship are also many in number (Hurlock and McDonald, 21;

Long, 31; Davis and McGinnis, 5; Griffiths, 16; Macfarlane, Allen and Honzik, 32; Varma, 42).

SEX FACTOR

The factor of 'social expectancy' starts functioning at a very early period of childhood. Conventional influences such as observations of the different modes of dress of the male and the female, different linguistic equipment to differentiate males and females, differential treatment on the part of parents and educators, all lead the child to get to know sex differences and this in turn affects his behaviour. A number of investigations have shown that there is a significant relationship between the behaviour difficulties of children and their sex (Hurlock and McDonald, 21; Young-Masten, 45; Griffiths, 16; Macfarlane, Allen and Honzik, 32; Varma, 42).

INTELLIGENCE

The highly precise, modern, standardized, intelligence tests have made it sufficiently clear that the degree of intellectual endowment is one of the significant criteria in the evaluation of behaviour difficulties. An impaired expressive capacity, cognition or judgement can seriously affect the satisfactory adjustment. A backward child may intensely dislike school, may indulge in offensive behaviour at home or in school or may play truant because of unhappiness, frustration and anxiety created in him by his inability to cope with the demands of the home and school. On the other hand, there is the picture of the gifted child who resorts to day-dreaming and develops habits of seeking unreal satisfactions because he is compelled to sit through lessons that are ridiculously easy and to him, therefore, boring. A number of studies has been conducted to study the relationship of behaviour difficulties of children with their intelligence (Hollingworth, 17; Terman, 41; McGhee and Lewis, 34; Featherstone, 7; Lightfoot, 30; Mcfarlane, Allen and Honzik, 32; Myers, 35).

Social Factors

From the earliest days onwards the motivating values of a child's environment have been recognized, and it was always considered to be essential to set up an ideal for the child and to give him suitable training. It is an agreed fact that children's behaviour is determined, formed and shaped by the people around them. Patterns of behaviour, normal or deviant, as has been amply demonstrated by psychoanalysts as well as anthropologists, are traceable ultimately to seeds sown during the innocent years of infancy. The socio-economic status of the family, size of the family, the type of family system, parental age, parental attitudes, parental maladjustment, parental supervision, the type of school, community and culture—all affect the development of behaviour patterns of children. It is beyond the scope of this article to discuss the roles of each of these factors in the behaviour development.

The long-suffering middle class child burdened with undue and conflicting parental demands (Green, 15; Varma, 42), the self-centred 'only' child and neglected delinquent children from a very large family (Damrin, 6; Glueck and Glueck, 13), the maladjusted children of the over-protecting, pampering parents (Levy, 29; Symonds, 40), all indicate the influence of social factors upon the development of deviant behaviour in children.

Personal Historic Factors

Granting a similar biological heritage and similar sociological field, still individual variations in behaviour patterns are noticeable which can be traced to these personal historic factors of the individual. Modern theories of personality organization place a great deal of emphasis upon these personal historic factors which occur from the time of conception to the stage when the individual reaches his grave.

Rank's (36) theory that the entire development of personality revolves round the birth of trauma of the organism, Kanner's (25) citation of a number of classical investigations pertaining to both the physiological as well as psychopathological effects of birth injuries, Adler's (2) styles of life of the first, second and third-born children and the consequent investigations of Jones (24), Krout (26), Abernethy (1), Glueck and Glueck (13), Lasko (27), on the relations of order of birth to the behaviour patterns of children, the investigations of Isaacs (22), Ribble (37), Bernstein (4) upon weaning and its relationship with behaviour patterns, the studies starting from Adler right up to the present day upon the effect of sensory or physical defect upon the behaviour difficulties of children, all show the importance of personal historic factors upon the development of problem behaviour in children.

Common Behaviour Difficulties of Childhood

Childhood can be divided, for the sake of convenience, into three periods (1) infancy or babyhood beginning with birth and extending up to the age of two; (2) early childhood or the pre-school period extending from two to five years of age and (3) late childhood beginning from four years and extending up to puberty. Each stage has its own characteristic difficulties of behaviour.

BEHAVIOUR PROBLEMS OF INFANCY

The period of infancy is one of the most critical periods in a baby's life as it is at this time that the baby gets adjusted both physiologically as well as mentally to the outer world. Hence difficulties are bound to occur now and again, but parents need to remember that the baby is going through a difficult period and needs sympathetic and careful handling.

The common difficulties that occur during this period are feeding difficulties, sleeping difficulties, difficulties in toilet-training and screaming and crying fits. These problems, though most common in infancy, may well persist through childhood and even into adulthood with varying expressions at different stages. It is not relevant to discuss the more obvious physical causes of these difficulties here, but it seems more apt to indicate their psychological significance.

These difficulties are often a symbolic representation of the internal conflict and anxiety that range in the child mind. An infant who is tense and anxious is bound to release his anxiety through any one of these problems. Sometimes they serve the purpose of an attention-seeking device. He may resort to these tricks if he feels that he is neglected by the adults or if he knows that by these manifestations he can make the adult dependent upon his will. Often an over-anxious mother induces these difficulties in the infant. For instance, the undue anxiety of the mother tends to make mealtime an ordeal for the baby. It takes all the pleasure out of a normally pleasant task, and leads to feeding difficulties for the infant. Especially during the lactation period if the mother is emotionally disturbed, it alters the quality of the milk, so that the infant has both his appetite and digestion upset. The importance of undisturbed breast-feeding has been recognized more and more by investigators for infants' healthy development. Isaacs (22) even goes to the extent of saying 'the most serious disturbances in mental life are undoubtedly associated with severe deprivations in the suckling period'. The golden rules about child-care are (1) to discover the natural rhythm of the infant and adjust the training processes to this rhythm; and (2) to treat the training processes as unemotionally and calmly as teaching a child to learn to climb or swim.

BEHAVIOUR PROBLEMS OF PRE-SCHOOL AGE

The pre-schooler is better adjusted to the outer world, he is more independent and he is more curious about the outer world than the infant, but he is still ill-equipped to meet all the demands life makes on him. He lacks control — physical, mental and emotional; he is still unable to tolerate frustration and disappointment; he cannot suffer delay and he is essentially self-centred. As a result, difficulties of behaviour are so common at this stage that we should regard them as the rule rather than the exception. It is only if they are frequent, persistent and tend to occur even after the pre-school age, that they need be taken seriously. But owing to unwise handling, frequent changes of nurses or homes, inconsistent discipline, or unhealthy experiences such as severe illness or shocks, these difficulties, otherwise normal, are likely to persist.

The common difficulties that are seen to occur at this stage are negativistic behaviour, fits of obstinacy, temper tantrums, destructive behaviour, selfishness and rivalry, masturbation and fears. These difficulties of behaviour serve actually as a socializing influence which is very often not recognized by parents and teachers who regard such behaviour as unreasonable and a nuisance. They are a healthy sign if not too frequent or too persistent and are often a symbolic expression of the child's struggle for independence. The excessively good child is usually either below average in physical health or his environment is so artificially controlled to avoid all friction that he will be 'headed for difficulty later on' (Jersild, 23). Problems of masturbation and fears are often the indications of internal anxiety that the child feels on account of a fear of loss of love and security. Parents and teachers should be careful to see that the child is given sufficient warmth and security which will enable him to withstand the strenuous battle of life. As the task is tough, lapses are bound to occur and so long as they are not too serious or persistent, it is better to ignore them.

BEHAVIOUR PROBLEMS OF LATE CHILDHOOD

The late childhood is a comparatively calm period. Children at this stage are far less dependent on grown-ups; they are more stable, both emotionally and physically than their young brothers and sisters of the pre-school age. Difficulties of behaviour are neither so marked, nor so numerous at this stage as during the pre-school years or during adolescence. The major problem that faces the six-year old is adjustment to the school set-up, and to the peer group. By now, he is not much interested in playing around the house and does not desire any pleasure in family parties or gatherings. The child has entered the so-called 'gang age', when social consciousness develops very rapidly and the chief goal of the child is how to be an accepted member of his group.

It is this desire to be an accepted member of the group or the gang-spirit which is often the cause for many behaviour difficulties noticed at this stage. This group loyalty makes the child accept without question whatever activity is suggested by the leader of his group but rebel against the suggestions of adults at home and school. Boys and girls of this age are often found to use slang, play truant from home and school, develop attitudes of contempt for rules and those in authority, shift their loyalty from homes to groups, develop snobbishness, and derive joy in the wanton destruction of property, only for the sake of their group. However, most of the undesirable effects of gang life do not persist for long. As the child matures, the undesirable effects are overcome and the socializing influence of the gang produces a better-adjusted individual than is true of the child who has not had the experience of being a member of a gang during his childhood.

Parents must get reconciled to the fact that during this period, play groups are more important to the child than the home, and the approval of the group means more to him than that of members of the family. Parents and teachers can help children only by subtly directing them into the proper healthy groups. It is their duty to see that children do not get into the wrong gangs. The child's need for adventure must be satisfied adequately and healthy social contacts through club work or athletics should be provided for him.

Conclusions

A principle that emerges from experience as well as from study is that behaviour, normal or deviant, is the result of multiple causation. Had there been only a single cause for problem behaviour, the problem of mental adjustment would be comparatively straightforward and easy. In that case, it would not be difficult to select the single factor that operates, modify it and effect a cure. Unfortunately, the task is not so simple because behaviour difficulties are found to originate in an inter-action of a multitude of factors; no one cause, no matter how important it may be, ever operates in isolation.

The problem behaviour of a child is first his way of gaining satisfaction or of avoiding annoyances. To him it is logical, rational or necessary. Problem-behaviour is his way of satisfying desires for which he knows no other adequate method. The clue to therapeutic planning lies at this point.

Therapeutic Planning

The two most important areas where therapeutic planning can be effective are the home and the school. On the one hand, is found the need for parental and pre-parental education, and on the other, the need to adapt education to the pupil. Both parents and teachers should be so trained that they are able to distinguish dangerous habits in children from relatively harmless ones.

Lack of knowledge of child psychology and the inability of adults to correct children owing to their own adjustment problems are two reasons which cause mistakes in the upbringing of children. So the objectives of parent-education should be two-fold : (1) to provide them with the basic knowledge of the fundamental needs of the child; and (2) to modify the attitudes of adults who have adjustment problems of their own. The first objective can be met by introducing a course of child psychology into the final year of the high school, by contacting mothers through pre-natal clinics, maternity wards, infant welfare centres and other social agencies, and by contacting parents through the Parent-Teacher Association of the school. To meet the second objective is more difficult, because such mal-adjusted parents are unable to make use of these educational efforts as they themselves are emotionally disturbed. Here, the primary concern is to detect such parents through the help of social agencies, and then to help them to apply their knowledge to the practical fields of child-rearing.

These efforts at parent education together with the betterment of the socio-economic status of the family, appear to be the best way of avoiding the development of deviant behaviour patterns in children. If successfully applied, they will decrease considerably the state of latent delinquency.

The next step in the scheme for the prevention of deviant behaviour is to take measures safeguarding those children who are already in danger of developing problems. The school is responsible for helping the child to modify a pattern of behaviour that has gone wrong at an earlier stage. If teaching is adapted to the needs of the pupils, they can be helped to sublimate their anti-social tendencies. The teachers should always bear in mind the fact that one of the main objectives of education is to help the child to be successful in his personal relations with his fellow-beings, and that the percentage of first-classes and passes is not the only criterion that measures the success of an educational institution. Every school should make it a point to provide children with facilities for group-activities such as the Boy Scout Movement, the National Cadet Corps, the Social Service League, the Sports Clubs, etc., which will help children to sublimate their anti-social tendencies into socially accepted channels, and also give them a better chance to adjust themselves to community life. It is also necessary to have a well-organized guidance organization in the school to help problem children to modify their patterns of behaviour. As teachers lack time and training for this type of work, each school should have on its staff a qualified school counsellor. Though this is undoubtedly the ideal set-up, in our present conditions, it is a dream. Owing to lack of money and lack of trained personnel, to have a counsellor for every school is out of the question for at least another decade. The only alternative is to give short in-service training to one or two teachers from each school who, on their return, should be responsible for guiding the children of their school. Those teachers can at least spot the children who need help and send them to institutions where special help can be given. At present, most states in the country have a Bureau of Educational and Vocational Guidance. The number of such bureaux should be increased by setting up branches in each district and, if possible, in each big town of the state. As more and more trained personnel become available, and as financial problems ease a little, we may, perhaps, be able to have qualified school counsellors on the staff of every school.

In spite of these measures, if the troubles are deep-seated, it may be beyond the scope of the school to help these children. In such cases, they need special psychiatric and psychotherapeutic treatment, but unfortunately such child guidance clinics are very rare in our country. The time has come to make these facilities freely available to children, and to teach parents to take advantage of such facilities.

If a scheme for the prevention of problem behaviour such as the one outlined above, is put into practice, it may be possible not only to prevent an increase in problem-children, but also to increase the number of happy, well-adjusted and, therefore, useful citizens.

II. PROBLEMS OF THE EXCEPTIONAL CHILD

An exceptional child is one whose pattern of development deviates from the normal pattern because of certain disturbances of normal functioning, which may arise during childhood. Children differ from one another in a variety of ways: physically, intellectually, socially and emotionally. But when the differences become so significant that they need special attention, such children are termed 'exceptional'.

There is no complete agreement about who should be classified as exceptional, though most professional workers concerned with children agree that children deviating significantly in intelligence or in physical conditions should be included in this category. Some also tend to include children with severe emotional or social maladjustment and less frequently, even those culturally handicapped are labelled under this category. Although there is not much agreement about who should be classified as exceptional, most of them fortunately agree that those who are so classified need special help and attention.

The purpose of this part of the chapter is to point out certain patterns of behaviour that are not developmentally normal and hence need special attention in contrast to the ways of behaviour that are discussed in the last part, which, by adult standards, may seem odd or disturbing but are wholly appropriate to the age. As it is beyond the scope of this chapter to discuss the entire field of psychopathology of these children, it is necessary to restrict ourselves to a few of the more common kinds of abnormality that arise during childhood.

Before we go any further in our discussions, it would be well to bear in mind that these deviates consist of two groups: (1) children, who in spite of their deviations manage to get along with other normal children, with some help, (2) children who need special help and schooling, and who, if placed with other normal ones, would be absolute misfits. The former group consists of intellectually superior and backward children and children with slight visual, auditory, orthopaedic or speech defects. The second group consists of the gifted and mental defectives, and also of children with serious physical handicaps.

The first group differs from the normal pattern of development only slightly, and for all practical purposes, it may be better if we consider them normal children. It is not right to put them in special schools, thereby instilling in them a feeling that they are different from the others, because with a little additional help and attention from the adults, they can easily get along with other normal children. The best we can do is to help these children to get reconciled to their slight handicaps and to guide them into channels where they compensate for their handicaps. Often a doubt is raised about whether other children will be cruel to them and will instil in them a feeling of inferiority. On the other hand, it is more often found that as children grow older, they tend to be more and more sympathetic to handicapped children. In this connection, I may point out an incident that occurred a couple of months ago. Little Deepan, four years old, is a backward child and a voracious eater. After a birthday party, every child in the school was given a sweet. Deepan finished his share quickly, and came over to ask me for a second helping. I had just one left with me. With Deepan came young Arun, three years old, also demanding the sweet. When Arun saw that I had only one with me, and that Deepan was also wanting it, he immediately said: 'Aunty, give it to Deepan, he is a small boy.' Though Deepan was chronologically older than he, Arun knew that Deepan was not mentally old enough to compete with him and so was prepared to give in. It is admitted that sympathy at such a young age is not very common, but as children grow older, this sympathy for the handicapped increases. If deviations are such that children with them can manage to get along in ordinary schools, it is always better to send them there, rather than to special institutions.

The second group consists of really exceptional children. They need special methods of treatment; they find it difficult to get along with normal children; they need special curricula, special equipment, special attention and often special schools. It is this category of children whom we will take up for discussion in this chapter.

The Intellectual Deviates

THE GIFTED

The term 'gifted' generally refers to the most brilliant children, having an I. Q. of 130 or above. It was originally thought that the gifted children suffered more from emotional, physical or personality defects than the average children but Terman, after a series of investigations on the gifted, found that they excel the others in originality, perseverance, sense of humour, logical thinking, span of attention, etc. They are also taller, heavier and healthier than the other children. They are, on the whole, found to be superior to the others through the whole series of observable traits, with the possible exception of manual ingenuity.

These children do not usually do their best at ordinary schools. They get bored with the teacher's continuous repetitions, that are meant for average children, and as a result of their boredom and impatience, they either resort to day-dreaming to while away the time or play truant from school. A challenging curriculum and hard work are the answers to the problems of the gifted. It is these children who are to be the future leaders, and society cannot afford to give them a training that is not adequate to equipping them for the high task of Tomorrow's leadership.

Segregation, enrichment and acceleration are the three methods often resorted to in the training of the gifted. *Segregation* means of course having special classes for them. It works on the theory that the gifted child wastes his time in ordinary schools, and that if he is in a special class, where the teaching keeps pace with his learning ability, the best in him is brought out. The opposers to this point of view claim that such segregation will result in social maladjustment for the child. *Enrichment* refers to a special curriculum that is designed for the gifted in regular classes. It is generally agreed that the gifted in regular classes can be stimulated by differentiated assignments, but very often the poor teacher, faced with the problem of teaching a very large number of children, finds it a hazardous job to provide opportunities for children of different levels of intelligence. But if the strength of the class is not too big, this programme can be followed without much difficulty. Sheridan(38) suggests some ways of enriching the curriculum of English-teaching for superior students in a regular class. The method of *acceleration* refers to promoting the child to the next grade as soon as he masters the curriculum of the present grade. Acceleration within limits is justifiable, because gifted children being more mature socially, emotionally and physically can easily get along with children chronologically older than themselves but if it is practised to excess, this may lead to social maladjustment for the gifted.

THE MENTAL DEFECTIVES

Mental inadequacy differs in degree. It ranges from dull normal to absolute idiots. The present discussion will limit itself to that group of mental defectives who cannot profit from regular school work and who must, therefore, be provided with a different educational programme that will prepare them for vocational and social adjustment in the community.

These children fall into three categories:—(1) children who can learn the fundamentals of formal education, those with I.Q. roughly between 60 and 80, (2) children who can learn to keep themselves clean and do some simple crafts, with I.Q. between 30 and 60, (3) children who need even nursery care, those having I.Q. below 30. These children cannot get along in ordinary schools, but need very special help. If exposed to ordinary set-ups, they will waste their time, and the little capacity they have will be wasted on futile efforts. Discovered early enough, however, and given a training that is suited to their abilities, needs and interests, there is every probability of their being self-supporting, well-adjusted and respectable citizens, except, of course, those who need nursery care.

CAUSES OF MENTAL DEFICIENCY. The causes of mental deficiency are multifold. They are faulty hereditary endowment, cerebral damage before or after birth, serious illness such as syphilis, German measles, cerebral palsy associated with injury to the motor centres of the brain or serious accidents. It can also be the result of glandular dysfunctions, for instance, cretinism, hypothyroidism, etc. Other than these causes, there exist also emotional causes which bring about a condition among normal children resembling mental deficiency. Extreme emotional deprivation, frustration and insecurity lead to this pseudo-feeble-mindedness which often responds to psychiatric treatment; the most clear evidence of this is infantile autism. Children so affected behave like idiots; they do not talk nor do they respond to any external stimulus, though they are intellectually normal.

There is also a cultural factor often at work in mental deficiency. Members of some isolated communities, for instance, some hill tribes, appear as though they are mentally deficient but if cultural stimulation is provided, recoup very fast. Also, there are individuals with difficulties that retard academic learning. Children with reading disability, poor word-comprehension and minor motor-handicaps are sometimes wrongly diagnosed as feeble-minded.

EDUCATION OF THE MENTALLY RETARDED. The mentally defective child does not profit much from the programmes offered to the normal child. If, however, the programme is simplified and adopted to his developmental pattern and abilities, he benefits enormously.

CONTENTS OF THE SPECIAL CURRICULUM. The highest group, that is, the educable ones ranging in I.Q. between 60 and 80 can be taught the three R's, but the emphasis should be placed on reading and number-work common to the environment of the child. Reading should include street-names, signs, food-names, price-lists, household articles, family words, common animal names, sports-pages, or funnies. Writing work should be limited to simple compositions such as letter-writing or ordering foods, etc. Number work should be related to marketing, personal budgeting, etc. Teaching, good health-habits occupies an important place in the curriculum. A little science, such as the seasonal activities of plants and animals, can also be included. Another important aspect of the programme is art. Music, painting, dramatization and rhythmic activities are emotionally soothing and therapeutic. With this type of education, vocational training is also extended to these children. As a result of such comprehensive training, they do not find it difficult to adjust themselves to the demands of society.

The second group, that with an I.Q. range of 30 to 60, cannot be trained to read and write. These children benefit best in occupational centres. Simple crafts such as weaving, basketry, mat-making, etc., can be taught to them. In addition, they should be taught to keep themselves clean. Art programmes should also form a part of their activity.

The last group, that with an I.Q. of 30 and below, perhaps, can be trained only in personal care. For those with a very low I.Q. even this will be very difficult. They have to stay in institutions because they are incapable of looking after themselves without adult supervision.

If suitable training is given to these mental defectives, it is definite that the majority will be able to become self-supporting citizens. Most of them can be vocationally trained and will not have much difficulty earning their livelihood. They will also have the satisfaction that they are contributing their share to society. They cease to be a burden on society and become self-supporting and self-respecting citizens.

Physical Deviates

The physical deviates are of many types. They include children with (*a*) visual handicaps, (*b*) auditory handicaps, (*c*) orthopaedic defects, (*d*) speech defects, (*e*) neurological handicaps, and (*f*) handicapping medical conditions. These children deviate from the normal pattern of development on account of their physical defects and are hence termed 'exceptional children'. The starting point of Adler's system of Individual Psychology was the observation in his general medical practice that patients, handicapped by an organic defect, developed an unfavourable psychic attitude toward their life-problems, which presented many of the marks of a neurosis. Adler stated it as a fundamental law that 'children who come into the world with organ inferiorities become involved at an early state in a bitter struggle for existence, which results only too often in the strangulation of their social feelings'. He is right, of course, to a great extent if we compare these handicapped with normal children. But this sort of comparison is not fair because the pattern of development of these two groups is so different that it is almost incomparable. Many of these handicapped children cannot be put into regular schools unless special educational facilities are provided to them. But if they are given this special treatment they need not be socially or emotionally maladjusted.

The partially sighted, for instance, need a sight-saving curriculum. Completely blind children want a programme that appeals to the sense of touch, hearing or smell. The severely deaf and the hard-of-hearing benefit from lip-reading and in their case, the sense of sight must be trained to help them not only in ordinary visual activities but also in the art of communication. Orthopaedically handicapped children are in need of physiotherapy. Speech correction techniques have to be used on children who suffer from stuttering and stammering. Neurologically-handicapped children, such as the brain-injured, spastics and epileptics have to be educated on the basis of their intellectual, physical and emotional traits. Multiple handicaps are often found in this area; for example, a spastic may be mentally retarded, suffer from poor motor co-ordination and a speech defect as well. The educator can plan the programme for such a child, only if he has a knowledge of his problems. Children with handicapping medical conditions such as heart disease, poliomyelitis or tuberculosis, need, in addition to medical treatment, special facilities from the school and the community.

Given suitable help and training, these physically handicapped children can develop into healthy, well-adjusted and happy citizens. These children can even be placed in regular schools provided teachers are competent to cater for them. Both the teacher and the other children in the class must be prepared to make some sacrifices, for the sake of these handicapped ones. It is undoubtedly a difficult job and more so in our set-up, for we have such large numbers of children in each class. But if we can do it by taking a little additional trouble, we will have served two purposes: (1) to inculcate in normal children a greater respect for the limitations and potentialities of others, (2) to help these handicapped children to take their place in a world of normal children.

Socio-Emotional Deviates

Children deviate from the normal pattern of development not only intellectually or physically but also socially and emotionally. A child who is a social isolate, or a child who has not established control over his emotions will fall into this category. Generally, socio-emotional deviates are those who have unusual difficulty in maintaining interpersonal relationships. They find it very difficult to express themselves without causing serious difficulties for themselves or others.

The problems of these children are of different types. They range from those that can be removed by relatively simple adaptations in the regular classroom to those that require psychotherapeutic or psychiatric treatment. Seriously maladjusted children can be helped only if many community agencies such as the teacher, the doctor, the policeman and the social worker work in co-operation.

Space does not permit me to list the myriad possibilities of causative factors and their possible combinations, which contribute to these socio-emotional disturbances in children. A physical or an intellectual handicap, economic insecurity, wrong child-rearing methods adopted by parents, undue parental expectations or a broken home very often lead to socio-emotional disturbances. An underlying feeling of insecurity or inferiority is almost always at the back of emotional turmoil. If it is detected early and if the parents and teachers supply the child with an adequate amount of love, affection and recognition, this malady is almost always instantaneously checked.

Special schools such as certified schools are a means of treating those with severe disturbances. However, very often they only serve the purpose of a 'dumping pond' for 'bad boys and girls' and no study or investigation is made on these children and no suggestion is made for their improvement. These special schools will work best only if specialized assistance is made available to them. A team consisting of a psychologist, a doctor, and a social worker is an absolute necessity for the successful working of a special school. It should also be born in mind that wherever possible, the programme for these disturbed children should be a part of, rather than distinct from, the general educational programme.

Cultural Deviates

Children with cultural handicaps are not usually considered exceptional children. But in India a cultural handicap is a very potent factor, especially in the modern era of industrialization and the changing social patterns. Children of parents who are frequently transferred from place to place, children from minority racial and ethnic groups, often find it very difficult to adjust themselves to the new set-up. For instance, consider a South Indian child of eight or nine suddenly faced with schooling in North India. Her language, her dress, her customs, her games are all different and it is a Herculean task for her to get adjusted to the new school. It is very likely that many children may become socially maladjusted because of this cultural deviation. Too often, such children have deep feelings of inadequacy, endangered by the rejection of their peers and their marginal status in the new society.

Children, whose language difficulties prevent regular class placement, can be helped if some special classes are established to give them intensified language training. They can be helped to learn to speak, read and write the regional language in the shortest possible time, and only later do they need to be placed in regular classes. These pupils should be encouraged to take part in some of the school's activities such as educational tours, music and art or health education so that they get to know the ways of children of the locality.

CONCLUDING REMARKS

I have tried to point out briefly the meaning of the term 'exceptional children', the different types of common exceptions and the nature of the educational programme that each type needs. At the present juncture, a peep into the nature and psychodynamics of exceptional children is significant because (1) special services to these children, equipment or specialized personnel are few in schools, and (2) even existing institutions are not entirely satisfactory.

The following table will indicate the nature and number of institutions that exist in the country for the physically and the mentally handicapped.*

Name of the State	Total population in million	Number of institutions			
		For the mentally handicapped	*For the orthopaedically handicapped*	*For the deaf*	*For the blind*
1. Andhra Pradesh	35.98	—	4	1	3
2. Assam	11.86	—	—	1	1
3. Bihar	46.46	—	—	2	7
4. Maharashtra	39.50	3	7	11	14
5. Gujarat	20.62	1	1	4	13
6. Kerala	16.87	—	—	2	5
7. Madhya Pradesh	32.39	—	1	—	6
8. Madras	33.65	1	1	4	7
9. Mysore	23.55	—	—	1	5
10. Orissa	17.56	—	—	1	1
11. Punjab	20.30	—	3	1	5
12. Rajasthan	20.14	—	—	1	2
13. Uttar Pradesh	73.75	—	—	13	14
14. West Bengal	34.97	1	—	5	6
15. Delhi	2.64	2	2	1	4
16. Pondichery	0.03	—	—	—	1
17. Jammu & Kashmir	3.58	—	—	—	1

*Figures supplied by the Ministry of Education, Government of India.

The table given on page 193 reveals how few the institutions are. There are only eight homes for the mentally handicapped for the country as a whole. The majority of the states do not have any provision for the mentally handicapped. For the whole of South India, there is only one home that is situated in Madras. This is true too of the eastern part of India. There is just one institution in West Bengal which serves the needs of Bengal, Bihar, Assam and Orissa. In western and northern India the position is slightly better in that the west zone has four, three in Maharashtra and one in Gujarat, and the north zone has two, both of which are at Delhi.

As regards the orthopaedically handicapped, the situation is not as bad as for the mentally handicapped. We have about 19 institutions for the whole country. The south zone has five, the west has nine, the north has five and the east none.

For the deaf, facilities are much better. The total number of institutions for the whole country is 48, of which eight are in the south, 15 in the west, nine in the east and 16 in the north.

Of all the handicapped, the blind have the maximum number of institutions. There is a total of 94 homes for the blind in the whole country. The south zone has 21, the west has 33, the east has 14, and the north, 26.

In short, we have for the whole country, eight institutions for the mentally handicapped, 19 for the orthopaedically handicapped, 48 for the deaf and 94 for the blind. The number is negligible when we consider that the total population of India is about 437.85 millions. With the existing facilities, only a very small percentage can derive any benefit, and so, if any appreciable improvement is to be made, there is no way but to increase the number of institutions.

Even the institutions that exist, are not entirely satisfactory. Many of them are run by private organizations and suffer from financial difficulties. They lack trained personnel to run the institutions; they do not have adequate space and equipment; the methods adopted are not up to the mark.

Thus, in present conditions, it is necessary to take immediate steps to reorganize existing institutions with the help of specialized personnel, and to increase and extend facilities to all parts of the country.

The basic principles for the establishment of programmes for exceptional children are as follows :

(1) Early detection and prevention should be the goal of all public school programmes.

(2) Good mental health programmes lead to prevention.

(3) Children differ from one another, the degree of such deviation is our concern.

(4) We can help the children only if we win their trust and confidence.

(5) These exceptional children deserve specialized programmes for the development of healthy personalities.

(6) Specially qualified staff must be available to assist teachers and parents.

(7) Wherever possible, the programme for exceptional children should be a part of, rather than distinct from, the general educational programme.

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12

CHILD GUIDANCE

G.D. Boaz

In recent years principles of mental hygiene and the practice of child guidance have received great attention at the hands of psychologists and psychiatrists. In our country too, we are beginning to pay more attention to this particular discipline and also to realize the importance of the practice of child guidance. It may be of some interest to recall the history of this movement.

It is common knowledge to every student of psychology that Freud opened up new horizons in the understanding of man and his behaviour in the psychoanalytic system which he developed. Emphasis was given to pre-disposing factors based on the conflicts and experiences of early childhood, particularly in the oedipal stage, for the genesis of psychological disorders. But Freud was primarily concerned with the treatment of adult patients. He did not develop any consistent system for the treatment of children and their behaviour problems. Within the psychoanalytic school, this task of developing a system of treatment for children was undertaken by people like Anna Freud and Melanie Klein. Among the pioneering trio responsible for our understanding of depth psychology, it was Adler who gave the impetus for the founding and development of the child guidance movement. He also emphasized childhood experiences and the 'styles of life' developed during those early days, particularly as a result of conflicting situations within the family, as deeply influencing further development of their personality. He emphasized the need to give guidance and help to young children and their parents. As against Freud, Adler focused on psychological and sociological factors other than sex as etiological factors causing behaviour problems in the young child. Soon after Freud, Jung and Adler, and a number of psychiatrists and psychologists began to take an interest in these problems. Not forgetting Freud's teachings, they supplied a good theoretical edifice for the understanding of normal and abnormal behaviour in children, giving emphasis to non-libidinal forces. Family relationships and conflicts came to be interpreted without directly bringing in the concept of infantile sexuality. At the same time, the need for guidance in securing and maintaining proper mental health was realized more and more. Behaviour problems, which were originally ascribed to sheer wanton mischief and a devilish disposition, came to be understood as the inevitable consequences of emotional conflicts and resulting complexes. When these ideas came to be generally accepted, child guidance, its theory and practice, developed rapidly.

The human baby and its behaviour have certain characteristics which necessitate guidance programmes, particularly in a complex society. It is sometimes remarked that the mother, even a bad one, knows how to bring up her child better than scientists or scientific institutions. It is implied in such sentiments that what may be described as the maternal instinct is the most trustworthy guide. Unfortunately, this is not true. We know today that human behaviour—adult or child—is not guided and directed by instinct as it is in animals and birds.

Extending this instinct-hypothesis to man, various psychologists, notably McDougall, have formulated lists of instincts as responsible for his behaviour. These proposed instincts include the self-preservation instinct, sex instinct, parental instinct, self-assertive instinct, gregarious instinct, curiosity, and so on. The lists are as varied as the number of psychologists who have attempted them.

Gradually psychologists began to observe certain characteristics of human behaviour which did not agree with the nature of instinctive behaviour, as it was generally understood. Man does not seem to have any of these urges in a rigid and stereotyped form that we find in the lower animals. He does not build only one type of nest or house. He does not protect himself in any one stereotyped manner. In fact, even the self-preservation instinct does not seem to be very strong when we consider the fact that many individuals voluntarily commit suicide, which no animal ever does. So also, a number of human individuals refuse to procreate, again something which an animal never does except when forcibly prevented from doing so. The variations, the complexity and the freedom of choice which mark human behaviour even with reference to self-preservation and race-preservation, have suggested the futility of applying the same instinct hypothesis to explain it. Hence, modern psychology uses concepts like innate propensities, unlearned motives, biological drives and such other terms to explain most human behaviour. Human activities, though some of them may originate from the physiological needs common with animals, are so much influenced by human standards, customs, traditions and values. Even physiological needs are satisfied in human ways which are very different from that of animals. Interests, attitudes and vocational ambitions all affect one's motives. More : at the human level, we have what is usually called 'character.' When we examine these characteristics, we find that in man there is something definitely new.

Socialization of Biological Drives

It is true that man has these biological drives in common with animals. But the true characteristic of the human species is not this point of agreement. It is his capacity to handle these drives in particular and peculiar ways. The fundamental difference between man and the animal, is man's ability to deal with the biological needs as he pleases or learns from his society. The complexity and increasing variability of functions, developed in the nervous system of man, make it possible for him to bring about changes in his conduct and behaviour. As a consequence of this physiological factor, man develops a particular way of using and taking advantage of this complexity and variability. This is reflected in the characteristics which we call intelligence and the developing personality. Owing to these two factors, intelligence and the developing personality, man learns to deal with his biological drives along particular lines, often in conformity with members of his social group. This conformity to the social group, or what we may call socialization, is an important consideration in determining the individual's behaviour even with regard to his managing the basic drives.

In this process of socialization, there is also a growing awareness of right and wrong. In popular language, man uses the term 'conscience' to describe this awareness of right and wrong. In psychological literature, Freud has brought in the term 'super-ego', one of the functions of which is the same as that of conscience (in Freudian literature super-ego is not identified with conscience as ordinarily used). There is always a conflict in man between the basic drives and what is required of him by society, and by his own developing moral standards. Parents, of course, play an important role in this particular aspect of the development of the child. From them, and through its contact with the outside social environment, the child gradually gets its values and ideals.

SOCIAL MOTIVES

Man has also developed a number of needs which are not through his interaction with some other person or group. Some of the earlier psychologists postulate instincts like the gregarious instinct, the instinct of self-assertion and the instinct of submission. This particular classification may not stand the test of criticism, apart from the fact that we do not use the term 'instinct' to explain human behaviour.

There are cultural variations in social motives more than in other areas. The fact that man develops a culture of his own is one of the important differences between him and the animal. The fact that man has chosen to live in society has led him to develop various norms and values which to a large extent determine his behaviour.

The social motives overlap a great deal in their nature and function. Some of them are closely inter-related. Hence, it is very difficult to classify these motives into well-defined categories as universally applicable. However, the five following broad classes of social motives may be mentioned for purposes of convenience. They are security, self-assertion, submissiveness, acquisitiveness and values.

SECURITY. Man seems to have a need of companionship and a sense of satisfaction and security resulting from membership of a group. This probably is the real meaning of the instinct of gregariousness postulated by some people. Even infants show signs of having this need. At first, the infant is satisfied by actual physical contact with some attending person. This gradually develops into a social companionship. Further, in the early stages, this sense of security comes from being physically near to other members of the family with whom positive relationships have already been established. But gradually, there is an expansion of the circle within which this need is expressed. The individual becomes a member of various groups, religious, political, social, etc.

SELF-ASSERTION. Many psychologists consider the drive to assert oneself as a strong and fundamental motive directing all human behaviour in his social relationships. On the basis of clinical evidence, Adler went to the extent of claiming the self-assertive drive or the mastery motive to be the most fundamental and universal for all mankind. Just as Freud emphasized the sex urge, Adler emphasized the self-assertive drive. Anthropological evidence shows that the drive to dominate or to assert oneself or as some people call it, the will to power, is certainly not a universal fact. There are many societies in the world in which no trace of competing for power or prestige is seen. On the other hand, there are several communities and tribes among whom such a tendency can be noticed to a marked degree. Whether an individual is driven by a need for power and mastery or not will depend on the cultural factors of his social environment.

SUBMISSIVENESS. Though one may not fully agree with McDougall in his classification of instincts, his mention of submissiveness as a characteristic of human behaviour seems to be acceptable. Man does show at least sometimes, a tendency to submit himself to some kind of authority including supernatural powers. Suggestibility and imitation which often characterize human behaviour can be explained in relation to this motive. This also makes learning and guidance possible.

ACQUISITIVENESS. In this, again, we find wide variations among men according to their culture. In some groups individuals seem to be driven by a competitive desire to accumulate material possessions in the form of money or property. But there are also many other groups among whom such a desire is not found at all by anthropologists. Sometimes one may be driven to acquire wealth merely to satisfy a desire for dominance, power or prestige. Sometimes the abnormal desire for acquisition may be a pathological reaction to an earlier experience of severe deprivation of food or money. But on the whole, human society is arranged in such a way that everyone has to contribute something towards the material needs and the maintenance of oneself and his family. It may be more profitable to understand the need for acquisition as expressed in human behaviour against this background of social framework, and the needs created by it.

VALUES. As pointed out earlier, the social motives are not independent at all. It is only for the sake of convenience that many people have considered the sense of values as a separate factor directing behaviour. Psychologists have even attempted to enumerate a number of values under this main heading. Some of the values mentioned are: economic, aesthetic, social, ethical, religious, etc. Man is certainly influenced and directed by the various values in life which he accepts for himself. But we may understand his behaviour better if we consider these values as characteristics of his entire social life, and not as separate drives by themselves. Human nature and human behaviour should be understood only against the structure and functions of the world of values. It is here that man seems to be distinct from the animals.

Before the child guidance movement is advocated on a large scale in our country, it is necessary to clear another misunderstanding that many people seem to have. Even in the minds of highly educated people, there seems to be some reservation regarding the relevance of child guidance and child guidance clinics in a country like India. There is a suspicion among people that these things are un-understandingly imported from the west. It is implied that these psychological services are more necessary for countries in the west where life has become too fast and complex. It is even mentioned sometimes that the incidence of mental health problems are negligible in our country. Here again, such opinions are more misleading than helpful. It is true that in many western countries, life has become very complicated and fast, thus creating a large number of difficulties and problems for the individual. In recent years, western psychiatrists have particularly realized the ill-effects of certain techniques of child-rearing on general mental health. Before the development of child psychology, a certain rigidity and sternness characterized methods of bringing up children. This was supposed to be good for the child as against indulgence. It was believed that the expression of love, if shown beyond a degree, would make the child either soft or indisciplined. Discipline was the main aim. But today, partly as a result of contact with other countries of the world, western scientists are advocating a change in these attitudes using technical terms as 'permissive ways of child-rearing'. It is even maintained by some, that the expression of love shown to the child can never be too much. Another area where a significant improvement has occu red in western conceptions of child rearing is in the attitude to the formation of habits dealing with the intake of food, toilet, etc. Appearance of these changes are also to some extent, due to contact with the culture of other countries in addition to their own clinical experiences. In this area also, most western psychiatrists now preach permissive attitudes. Most psychiatrists have even shown with the help of statistics that the causes of psychological disorders in adults and problem-behaviour in children can be directly traced to the stress and strain produced during the inculcation of strict discipline in regard to these matters, during childhood.

The claim that in our country we do not need any large-scale programme of child guidance is false in regard to both its assumptions. Unfortunately, we do not have proper statistics of such popular cases, since there are no clinics and institutions. But those who have worked in some way or other in this field, feel that there is urgent necessity for such a service. Those who have made a scientific study of juvenile delinquency, trace the etiological factors in most of them to the mishandling of children by ignorant parents. This is a significant fact because a large number of delinquents come from rural areas where life is supposed to be less complicated and rapid. Even if we accept the thesis that a more advanced industrial civilization will produce a greater incidence of psychological disorders, it must be pointed out that our cities cannot escape the working of such a law. In fact, the danger is more for our cities, since against a gradual growth of industrialization leaving room for adjustments, we are faced here with an overnight programme of industrialization.

The reader may, perhaps, wonder why this long introduction to the topic 'Child Guidance' is necessary. Experimental psychologists may succeed in precipitating the experimental neurosis in animals. Experimental neurosis is nothing but the reaction of an animal to a situation, to which it has been made impossible to react. It seems to be more a break-down and disorganization of the physiological system which is primarily responsible for receiving and reacting to stimuli. For all we know, the question of mental health, as we ordinarily understand the term, does not seem to arise for animals. But the process of growing up is by no means easy for human beings. There seem to be crisis after crisis. At every stage, the child has to take cognizance of the social situation and home environment around it. All that we have said in the preceding pages about socialising the biological drives makes demands on the growing child. It is a continuous process of modifying the innate drives to the standards and demands set up by outside agencies. At no stage is there a ready-made pattern of behaviour, to make a satisfactory adjustment. Hence, in this process of growing up, there are innumerable sources of error that the child could commit. Every mistake that is made leaves its impression, and causes a twist as it were, in the growing personality. It is true that the human personality is very tenacious and can stand plenty of such twists, and still pass for a normal individual. But it is also true that if these mistakes are accumulated beyond a certain point, what we call problem-behaviour and psychological disorders of varying kinds set in. This is why the question of mental health assumes importance and becomes necessary for the human being. The individual has to conform to a certain extent at least to the norms of behaviour set by society, and at the same time be sensitive to the inner demands of growth and development. Before any guidance can be given to an individual child, one has to appreciate the full effects and nature of the various processes, that are involved in this phenomenon of human growth. Growth and development must culminate in self-fulfilment, attaining the fullest stature, appreciation and development of all talents and abilities, and mastering a technique for happy and efficient living. It is against this background that we must understand the process of mental health. Guidance, particularly for children, may be needed in mental health and education. Vocational guidance is more pertinent at about the adolescent stage.

Mental Health

Prevention is certainly better than cure. Just as medical science has developed many principles to maintain proper physical health, so also, psychology points out certain fundamental principles of mental health. Sound mental health depends upon a proper development of personality. As the body needs proper food and water, so also, certain psychological needs must be met before sound mental health can be ensured. Behaviour problems arise in children mostly because of some negative factors in the environment, viz., in the home or in the school. To give emphasis to this fact, some people even make the statement that there is no problem child but only problem parents or problem teachers.

HOME ENVIRONMENT

The child must have a sense of security, not only physical security but also emotional security. A sense of physical security may be available in most homes, subject only to the limitations of economic resources. But, one cannot take emotional security for granted to the same degree. The child needs to be loved and to love. The child should not only be able to take for granted complete affection from all members of the family, but also be able to express its own love in various ways. Only then is a sense of being wanted developed. One other factor which promotes a sense of security is the happy and harmonious relationship between parents and other adult members of the family. The child's sense of security will be badly shattered if there are frequent quarrels between parents or if family life is disrupted in some form or other.

Through this sense of security, the child should also develop a sense of belongingness. It must have a place in the family structure. It must be recognized as an individual and respected. The child's needs and feelings should not be taken for granted, nor should they be ignored. They should be given responsibilities and duties in the home, of course, according to their age and capacity.

Every child, just like every adult, needs recognition. We know that it is a very painful experience if others do not pay any attention to our achievements and successes. If we, adults, need some kind of recognition from others, children need it much more from members of the family. Praise, encouragement, attention and recognition should be freely given to the child. Here one should also take the trouble to provide opportunities for the child to succeed. This means providing properly planned activities which the child can accomplish. The experience of success is by itself a fundamental need for growth and development.

A child is bound to fail in several things. Undue criticism and ridicule should be scrupulously avoided. Children within any family, are also bound to differ from one another. Parents should realize this and never make invidious comparisons between one child and another to the point of hurting one of them. If one child happens to be clever in some particular activity, he should not be made a showpiece to be exhibited before visitors, particularly with the additional remark that the other child is no good. Anything that will hurt the self-respect of the child, should be avoided.

Love and affection, if properly shown, can never be excessive. But affection and love should not be directed towards protecting the child too much to the point of not allowing him to develop a sense of independence and self-reliance. Adult help should be given only within limits and where necessary. Gradually the child should be taught to do most things for himself and to rely on himself. Otherwise, he will develop into a very poor specimen of human being though he may pass examinations with distinction.

There is yet another problem peculiar to our country. Sometimes even so-called educated parents become over-anxious about the scholastic achievement of their children when they are still quite young. They goad them to compete with others, giving high pressure tuition without allowing them enough time to play, and canalize all their activities into the requirement of the school curriculum. Often it may happen that the child is not suited to such a programme. Mostly this would result in the denial of a number of varied experiences necessary for the all-round development of the child. Many parents need to be given guidance on this point. In the minds of many people, there is a too close association of success in life with scholastic achievement. Many would even equate the two.

Though it is impossible to exhaust all the factors that affect mental health, we may add a few more. Any undue anxiety, tension or fear in the parents is bound to influence the child. Parents will naturally be careful about the child's physical health. But if they lose their balance, every time some ordinary sickness befalls the child or whenever there is a slight injury, it will not develop a proper attitude to some basic facts of life, such as sickness and pain. The child should be helped to develop a certain amount of confidence and healthy indifference to such experiences of life. In many homes children get by contagion a number of necessary fears from the parents. Superstitious fears, which often act like brakes in our life are mostly passed on to children by parents.

SCHOOL ENVIRONMENT

When the child has begun attending school, additional factors come into play. The factors pertaining to the home will continue to operate. Every stage has its own demands and needs. But on entering school, the child faces certain new experiences which are significant from the point of view of mental health. These new factors pertain mostly to school work, the presence of other children, and the personality of the teacher. One of the new factors that enters into the experience of a child at school, is that of the authority and the role of the teacher in maintaining discipline. The child may find the teacher lenient at the outset. But gradually, the child must learn to accept authority, from people other than his parents. So far, the child has been protected within the home, any form of authority coming only from his parents. Now for the first time, other agencies begin to exercise authority over him. It is not always easy for the child to accept this new factor. He will have to be helped. Parents should help in this process. Otherwise, strong feelings of rebellion and hostility may develop which may take, in later years, undesirable forms. The teacher should be careful not to present himself to his pupils as a person having authority and power. Autocratic and authoritarian behaviour does not do any service to pupils. At the same time the energies of the child should be mobilized in such a way that it recognizes and accepts limitations in his behaviour arising from the demands of the group.

Allied to this factor is the need to develop in the child proper attitudes towards discipline. Discipline is not maintained for the mere upholding of a rule that may be wise or otherwise. Neither do we mean by 'discipline' the channel by which the teacher can show off his power and authority. A teacher who often resorts to disciplinary measures must be a poor specimen of the teaching profession. What we call 'indiscipline' in schools is mostly a reflection of the inefficiency of the teacher. This does not mean that pupils can be encouraged to develop a *laissez-faire* attitude. Children should be helped to cultivate a sense of discipline for the sake of the common good. Any disciplinary measure should be an expression of the whole group which the child must be taught to accept in good spirit. The need to maintain proper discipline and self-control is part of the process of growth and is a demand of group life. Punishment should not be an outlet for the teacher's temper.

The need for success and recognition mentioned as a factor in the home is also an important factor at school. The school programme including co-curricular activities should be so arranged that every child has the chance to experience success. It is a hard fact that in each class there will be some pupils who do not come up to expected standards in various subjects. The teacher should know how to deal with these pupils. Punishing for failure may often create undesirable tensions in the pupils. Very few pupils will be so indifferent that failure does not worry them at all. Repeated failures do create irritation, sense of frustration, inferiority feelings and strong emotional conflicts in pupils. In addition, if any sort of punishment is meted out, in all probability the mental condition of the child will be shattered still further. It is bad enough to fail; to be punished for it is worse still.

To the extent possible, individual attention should be given and work assigned in such a manner that each child gets a good measure of the experience of success and encouragement from the teacher. The proper development of the personality includes the development of the intellect.

Success in other activities leads to the acquisition of skills. The two are closely related and both are necessary to develop a sense of personal adequacy. Different children may be good in different things. With an understanding of these individual differences the pupils should be encouraged and helped to develop various skills. Co-curricular activities should be used mainly for this purpose. Regular classwork such as writing, story-telling, working out arithmetical problems, drawing and painting should also be considered as different areas in which children can develop skills. Some activities, such as drawing and painting, acting and other kinds of entertainment, writing stories, can also be used to develop a capacity or creative work in several pupils. Of course, all children may not be equally good in creative work, but those who have some aptitude in one particular line should be spotted out and given encouragement and opportunities.

Another important factor is the atmosphere of the classroom which is determined to a large extent by the teacher's personality and behaviour. For a long time, it was taken for granted that if the teacher knew his subject and methods of teaching, he would be a successful teacher. Then it was emphasized that the teacher should also know the nature of his pupils. Now we know that the personality attitudes or in general, the mental health of the teacher is also an important factor that affects the growth and development of pupils. By his outlook on life and behaviour and the manner in which he deals with children, the teacher should be able to infuse confidence, cheerfulness and encouragement into the minds of the children. The teacher should be largely free from tension, temper and unpleasant moods.

Another important factor that comes into the life of the child on entering school, is the existence of other children. Within the home all children may not get the chances of becoming easily socialized. Social intelligence has to be learnt and developed by appropriate experience with pupils of the same age, elders and youngsters. In the school the child is thrown into the midst of a number of children of his own age. He has to learn to move with his peers to make friends, to develop companionship and, in general, to get on with other people. Cooperation, the team spirit, initiative, leadership where necessary and possible, the acceptance of leadership from others, taking defeat in the school situation, etc., have all to be learnt. The teacher should know the poor mixers, the timid and the shy, the bully, the lonely.

The teacher must consider it a part of his duty to make it easy for the pupils to develop proper social attitudes, social skills and friendships. Personal traits, such as aggressiveness or domination, will often determine acceptances and rejections. The teacher must make sure that no undesirable trait or factor is allowed to develop in any pupil. Care should be taken that everyone has a sense of security and acceptance within the group.

SPECIFIC BEHAVIOUR PROBLEMS

The preventive aspect of mental health may often be neglected. Parents as well as teachers may take note of the problem of mental health, only when something goes wrong to the annoyance and disturbance of adults. Children get troubled within themselves, when natural demands are not properly met. Frustrations and negative emotions develop, building up tension. As a result of these, they may develop undesirable outlets of their tension, resulting in what are called behaviour problems. An important part of any guidance programme will be to deal with such behaviour problems. However, when dealing with a particular case it is not the problem that matters, but the child, who is trying in his own way to solve some of his real difficulties encountered in his relationships in the social environment.

As a pattern for understanding child behaviour, we may mention a few problems and difficulties. Some problems may arise specifically in the life at home and some in the life of the child outside, including school. Behaviour problems may also include serious psychological maladjustments that require specialized treatment.

It is important to understand what constitutes a problem behaviour. Parents and teachers, may call as behaviour problems, attitudes and behaviour of the child that go against their cherished ideas of discipline, decorum, social conformity, etc. But the professional psychologist, who views the whole matter from the point of view of the inner mechanisms operating in the development of the child's personality, may not agree with parents and teachers. In 1928, an investigation was made in the U.S.A. on the ratings of teachers and mental hygienists on the relative seriousness of behaviour problems, by E.K. Wickman. From a list of 50 behaviour problems, the teachers were asked to select the first ten in rank order, and the last ten. The mental hygiene specialists were given the same list of problems and required to make the same kind of ratings. The investigations found a marked discrepancy between the ratings of teachers and psychologists. 'The teachers stressed the importance of problems relating to sex, dishonesty, disobedience, disorderliness and failure to learn. The psychologists stressed problems like withdrawing, fear, sensitiveness and recessive characteristics indicating unsocial forms of behaviour.

Teachers were primarily concerned with certain forms of overt behaviour considered to be anti-social, such as sex problems and aggression. But extreme suggestibility and fearfulness they did not consider to be serious. To the psychologist, these were much more serious as they indicated a very poor personality structure. If a child, for example, never gives the teacher any trouble, is always obedient, always does his homework and other duties, never quarrels with anyone, never takes part in mischievous activities, perhaps never even seriously takes part in the common life of the class, he may be considered by the average teacher a pupil of excellent behaviour and conduct. When presented with such a child, the psychologist may be seriously alarmed, since such behaviour may indicate a very serious lack of life energy or at least a repression of these forces which constitute a healthy life. As such, he may even suspect that such a child is possibly heading towards some severe forms of psychological disorder. Wickman's study was made in America several years ago. With the increasing availability of psychological knowledge, teachers in America have changed their attitudes to a large extent. This was indicated in a similar study made very much later by another investigator in 1952, (A.W. Stouffer). This investigation found much closer agreement between the ratings made by teachers and psychologists. Still there was much difference with regard to the bases of their judgment.

Some children may develop the problems merely as attention-seeking devices. Their need for recognition may not have been satisfied. By constantly disturbing the parent or the teacher, they try to come into the limelight. Sometimes the mere fact of their energies not being canalized into worthwhile and satisfying activities may be the cause of the development of some such behaviour problems. When a behaviour problem has set in, the teacher or parent should not get unduly disturbed or anxious. Such a reaction may make the problem worse. Always, a matter-of-fact attitude should be developed. In all dealings and contact with such children, sympathy, kindness and understanding must be shown. It is also important that the child's own energies and abilities should be primarily enlisted in dealing with the problems.

Problem of Serious Maladjustment

Some of the serious behaviour problems with definite symptoms are kleptomania, consistent truancy,extreme timidity, cruelty and bullying, stealing, stammering, etc. These problems are indicative of some serious psychological disorders. In fact, kleptomania is a psychological ailment and should be understood as such. All these problems are symptoms of conflict and unrest within the child.

In some cases, but for the escape of the pent-up emotional energy through these symptoms, a severe psychological breakdown might have occurred. Hence, such a symptom of problem behaviour is welcome. It is an escape for the child from tension and inner disturbances. Therefore, all efforts must be directed towards an understanding of the real inner difficulties of the child. Such children will need a regular programme of treatment. Parents and teachers should know that it is extremely harmful, if such symptoms and problem behaviour are driven out of the child through fear or other short-cuts. Punishment or reproach in any form should not be used. Even simpler problems and habits like thumb-sucking, nail-biting, etc., are escape-mechanisms indicative of a deeper unrest in the child's mind. The symptoms need analytic understanding rather than forced eradication.

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Stammering is invariably a psychological problem indicative of tension, fear and lack of confidence. In a few cases, stammering may develop if left-handedness was forcibly changed earlier. Stammerers can be helped a great deal by psychotherapy. The pupil having this defect should never be made self-conscious, because fear will make it worse. Those with speech difficulties are liable to develop secondary difficulties as a result of their defect. Inferiority feelings, fears and tensions are bound to develop in many cases. Unless they are sympathetically dealt with, a serious vicious circle may set in. Therapy must be directed towards finding out the conflicts behind the speech defect, towards breaking the bad habits of speech already formed and towards re-educating him to speak properly and with assurance.

JUVENILE DELINQUENCY

Delinquency is a legal term. The Government defines certain anti-social behaviour as cognizable offences. They include stealing, sex offences, destroying public property, begging, etc. When young, offenders are called juvenile delinquents. From the psychological point of view, there is very little difference between the delinquent and the problem child. If the child steals at home, we should not report him to the police and brand the child a delinquent. But if the stealing tendency has developed to the extent of taking things from other people, the child may be reported to the police. If he does not attend school regularly, he should not be called a delinquent. But truancy may easily lead to delinquency, if the child, with opportunities to wander aimlessly, gets into undesirable company. Any behaviour problem, that has developed to the degree of leading to anti-social acts, may fall within the definition of delinquency. Some years ago delinquency was viewed by society strictly from the legalistic point of view. In recent years psychology has given us a new approach to the problem of delinquent behaviour.

SEX PROBLEMS

One of the contributions of Freud is the fact of infantile sexuality. Contrary to the popular belief previously held, that sex feelings appear only with the onset of puberty, Freud has successfully shown that sex feelings are there right from the days of infancy, though, of course, the expressions of these feelings take completely different forms from those usually understood and experienced by the adult. Freud has also worked out in detail the complicated process of this aspect of child development. There are very serious psychological difficulties facing the child at different stages of its psycho-sexual development. In fact, some of these difficulties may prove to be the direct etiological factors for later psychological disorders. A detailed account of this problem may not be necessary here. Conflicts arising from libidinal sources may express themselves in childhood days only very indirectly. The guidance expert alone can appreciate and deal with such problems. In any guidance programme for the adolescent, this aspect of human development may assume much more direct importance.

GUIDING THE BACKWARD CHILD

The guidance clinic and, particularly the guidance officer in the school, will also have to help children who are not up to the mark in their academic attainments. The first possible reactions of impatience, anger and frustration on the part of parents and teachers have no place at all in dealing with such pupils. The knowledge of the various factors that cause the educational backwardness in children, is necessary before a particular child can be helped.

Backwardness may be temporary or permanent. Temporary backwardness is something which can be remedied by proper attention. Permanent backwardness is due to a lack of the necessary intelligence to cope with the demands of the classroom and hence comes under the category of 'mental deficiency'. The temporarily backward are those who are not mentally defective, but who function below their ability-levels, because of some disturbing factors. Apart from being a burden to parents and teachers, and a drag on the whole class, such backward children, through mis-handling, are liable to develop severe behaviour problems. Research workers have estimated that about 10% of the school-going population comes under this category. An enlightened society should not neglect these unfortunate children. Hence, the duties of a guidance clinic must include this service also.

Causes of Backwardness

Backwardness may be the result of any one or more of the following :— (1) Physical factors; (2) Environmental influences; (3) Emotional conflicts; and (4) Poor intelligence.

PHYSICAL FACTORS

In our country, this factor is a very significant one, particularly in view of the fact that the vast majority of our people are poor and uneducated. Many of our pupils are under-nourished and physically not fully developed. We have only recently directed our attention to proper medical service in schools. It is a matter for regret that even today many schools do not give any serious attention to the medical inspection of their pupils. Even parents are not educated enough to take this medical inspection seriously. Some investigations conducted by research workers have shown that in many schools there are a number of pupils whose defective hearing, defective eye-sight and general ill-health have never been noticed or attended to either by the school or by the parents.

ENVIRONMENTAL INFLUENCES

The term environement has a very wide meaning and it would be impossible to enumerate all the factors that could be considered under this heading. We could here mention a few of the major factors that affect the achievement of the average student.

(a) FACTORS RELATING TO THE HOME. Many students being poor come from crowded localities and live in houses that are not at all suitable for study at home. Only a very small percentage of our school-going population have a separate place or a table and a chair for their studies. Many homes do not even have the necessary ventilation and lighting conditions. The locality is often such that the young student is bound to get into undesirable company and bad habits.

Apart from these physical factors there may be many other conditions which are unhelpful for developing proper habits of study. Many pupils are actually overburdened with minor jobs of all kinds at home. Many of the homes do not contain any facilities that cultivate the taste and desire for intellectual development. Books, good magazines and even play materials are conspicuous by their absence. To add to these difficulties, in many homes, the attitude towards education is very discouraging.

(b) FACTORS RELATING TO SCHOOL. In cities many schools are not located in proper places. The physical environment of the school has been found to have a very bad effect on some children as revealed by an investigation conducted in Madras. Hotels and tea-shops of all grades, and picture houses surround some schools. While these conditions may not affect boys who are under proper supervision and discipline at home, they definitely affect quite a number of pupils whose home influence is not strong enough to counteract the call from these questionable places and undesirable companions. Because of these and many other associated factors, some children very easily slip into slovenly habits of work and show backwardness in scholastic attainment. If the school, without appreciating these factors, labels them backward and resorts to the usual methods of punishment and detention, the result is bound to be disastrous.

EMOTIONAL CONFLICTS

Few teachers are trained to understand and appreciate the emotional conflicts that may trouble the minds of many young students, as a result of which he will not be at his best in the classroom. A student of abnormal psychology will know the variety of causes that can produce conflicts in the mind of a growing child. Some of these causes may be such that the teacher is not able to help much in actual practice. Such factors would include the presence of a hostile stepmother or stepfather, the absence of a parent or parents, or a broken home. It may not be possible to remove such factors. However, such cases would be very few, and it would not be possible for an average school to cater for the emotional needs of such pupils.

There are many other sources of emotional conflict. From a study at Madras, it has been found that many backward pupils in some schools were victims of unhealthy methods of treatment by their parents, such as extreme harshness producing intense fears, and expecting much more than the student was capable of. A common factor in this category was the rousing of sibling rivalries by unhealthy and unwise comparisons made by the parents with other children of the family. In the investigation referred to, two other categories of pupils whose backwardness could be traced to emotional conflict, were also discovered. A few pupils, because of some environmental factor or other, could not reach the required standard in a previous year and because of the consequent detention were now too old for the class. These boys were found to have developed a strong sense of inferiority which was oppressing them.

This question of disparity in age within one class should receive very serious attention, if we want to develop the proper classroom atmosphere. Strangely, another category refers to students who in their earlier days were very bright. Because of their over-anxiety and, in some cases, because of their influence with the school management, parents succeeded in obtaining what they thought was a great favour, viz., double promotions in primary classes. A few of these boys were also found to have been admitted to higher classes to begin with, because of their supposed high intelligence. After two or three years, these students find that they have to live in a permanent state of tension to cope with their work. In addition to this strain, they are physically and socially less developed than the rest of the class. Consequently, they become the butt of ridicule; they are easily teased and bullied by the rest of the class. They develop a very deep sense of shyness and diffidence. These factors produce much emotional strain as a result of which there is a drag in their educational achievement.

The following example illustrates a number of environmental factors that could actually produce backwardness and emotional conflict in a boy.

Some years ago, a boy about 13 years old was brought to my clinic by his father on the advice of the headmaster. The complaint for which help was sought, according to the father and school diagnosis, was poor memory. It was reported that he was studying in the Second Form for the third year, having been detained twice. He was reported to be a hard-working student and one who knew his subjects well. But, at the time of the examination, he would forget whatever he had learnt and thus show poor achievement. The boy looked very smart and bright. He was a very lovable young boy, too. On the basis of some simple rough and ready tests, it was found that the span of his immediate memory was higher than the average of his age. Partly to test the kind of things he could remember, I asked him to mention the names of a few of his friends in the school. He thought for a long time and could not produce even a single name. I helped him by asking him to think of his own class and classmates. He was able to mention just one name. Then I asked him who sat on either side of him. A proud reply came that he was sitting alone at a side desk in the classroom. On further enquiry the following facts were gathered from the boy:

The father was a government servant working as a clerk in the Revenue Department. For some unknown reason, though a graduate of the University, he could not rise very high in the official ladder. He had dreams of the Collector's prestige and status. When the boy was born, he was determined to make him a Collector. Fortunately for him (or perhaps, unfortunately), the boy was very bright and intelligent as a child. The brilliant idea of giving him private coaching and admitting him to a higher class, skipping the first two or three primary classes, occurred to the father. This would help him to complete his M.A. degree at an early age, so that he could have a comfortable margin in years to try for a place in the I.C.S. The boy responded very well to the intense private coaching and when taken to the school for a test did very well and was admitted to a higher class, though physically he was quite small and young. In the first two or three years, he did well in classwork. Soon there was a strain to maintain the standard. Meantime, the father who lived in a rather congested and poor area, developed certain other ideas about bringing up the boy. To be a civilian, the boy must develop certain attitudes of aloofness and superiority, particularly since the neighbouring children belonged to a low socio-economic status. The boy was told not to mix with other children and not to cultivate their friendship. He was not allowed to go out of the house and play lest he should be spoilt by the other children. Even at school, he was not allowed to mix and play with others during recess and leisure periods. Some of these facts came to light during the conversation when the boy proudly said: 'I do not mix with anyone.' On being asked why, the answer promptly came that 'most of the boys were very bad, they told lies and they had bad habits.' It was as an explanation to this answer that most of the facts mentioned above were gathered.

On further enquiry, it was found that the boy had a very strict programme. Partly because he found it difficult to keep pace with his class, and particularly because of the father's desire to make him a genius, he had two tutors. Actually he had no time to play even if he was allowed to do so. Contrary to his father's expectations, things began to take a bad turn. The boy rapidly became backward in the class. All kinds of emotional conflicts developed in his mind. A sense of inferiority and helplessness began to set in. The fear of actual failure at the examination began to haunt him. When he came to the First and Second Forms, he had to spend two or three years in each class. Things became bad and he was about to become a neurotic. His vacant looks and utterly ignorant mind made the headmaster take the step of sending the boy to the guidance clinic. This example needs no explanation. The I.Q. of the boy was very much above the average; yet, because of very bad parental influence, the boy became backward.

There are several cases on record which illustrate sibling rivalries as causes of backwardness in scholastic achievement. When two brothers or sisters happen to study in a particular school, it is quite possible that the two do not have abilities of the same level or kind. One probably has higher intelligence and gets better marks, or perhaps one is good in co-curricular activities such as singing, acting or debating. Unwise parents go to the extent of making unhealthy comparisons and teasing the child who is comparatively poor in attainment. Such constant nagging and constant reference to inferiority, produces emotional conflicts and a sense of rejection in the child's mind and gradually its ability to study or concentrate on school work is seriously affected. This results in a vicious circle for which parents are responsible. In such cases, when the two brothers or sisters are separated and sent to different schools, a common standard for comparison will not be available. It has been found in such cases, that the so-called backward child also does fairly well, and is able to cope with his work.

Children who have deep emotional conflicts and hence become backward, can be usually spotted by the behaviour problems which they present, or through their dreamy nature. They always have a vacant look and spend most of their time in daydreams. Such children can never do their best. Nor can they ever be made to do their best just by advice, punishment or detention.

In this connection, one other type of backwardness must be mentioned. Some children, in spite of their high general intelligence, are backward in a particular subject, say, language, arithmetic or science. This often surprises the teacher and the parents, because the particular pupil is proficient in all other subjects. As we said earlier, in the ordinary classroom situation, our examinations and tests merely aim at finding out whether a pupil knows his subjects or not.

Very seldom is any attempt made to find out why a child does not know his subject. For instance, in valuing problems in arithmetic, the teacher checks up whether the answers are right or wrong and by the simple process of adding up the marks awarded to each answer, the paper is marked as a failure or a pass. Very little thinking is done as to why an answer is wrong. The work of the ordinary teacher is not oriented towards that purpose at all. The following example makes the position clear :

A high school boy in his Fifth Form was once brought to me as being surprisingly poor in arithmetic and mathematics. He did quite well in other subjects. So, neither the teacher nor the parents could understand his failure, and because of his weakness in the particular subject, in some classes he was detained for a year. It was the threat of another detention that made the parent bring the boy to me. Intelligence tests showed that he was above average. On being presented with a few problems in arithmetic and asked to explain their meaning, the boy explained them well. His mathematical reasoning was found to be good. For some time, I could not really make out what was wrong with him. On further testing, it came to light that he was very poor in one of the basic arithmetical operations, viz., multiplication. As a small boy in the lower classes, he did not pay sufficient attention to his multiplication tables. This was never properly detected and consequently no attention was given to remedying it. The defect continued to exist in the boy without anyone taking serious note of it. Consequently, in any arithmetic paper the answers would mostly be wrong, since usually in any arithmetical problems, at some stage multiplication would be involved.

Such backwardness can only be dealt with, if we train teachers to use proper diagnostic tests, and also to consider class tests and examinations as teaching aids. Marking any test paper should be done in such a manner as to find ways of helping the pupil to learn better, and not merely to assess his achievement. We have at present a number of diagnostic tests. In fact, teachers should be trained during their training to construct and use simple diagnostic tests. In a language paper, for example, a student may obtain very poor marks merely because of weakness in spelling or grammar. If this particular defect could be rectified, the boy's average achievement may shoot up high. It is important to note that such special backwardness is not limited to a few cases.

Another investigation conducted at Madras brought out the fact that there was a surprisingly large number of pupils who come under this category. One boy whose level of intelligence was very high was backward in arithmetic, because he had not grasped the fractions, ratio and proportion. He possessed the abilities required for proficiency in Arithmetic. This boy was very good in

English and Tamil. Similarly, there were other boys whose backwardness was caused by a deficiency in a particular aspect of a subject. There was yet another boy who was poor in language because he did not know his grammar. In fact, this was found to be quite a common cause of backwardness in language. There were also boys who were supposed to be backward in English, but were realy good in everything but spelling. It would be very interesting to break up the subjects into different factors and test boys with differential tests. If we then make a profile for each boy, valuable results may be obtained. It is an unfortunate fact that one of the main causes of special backwardness is poor teaching in the early stages.

Parent Education and Cooperation

From what we have said above, it is obvious that parents have a special role to play in any programme of child guidance.

The statement referred to earlier that there are only problem parents and not problem children, is true in several ways. In many cases, parents are responsible for creating situations that directly produce several conflicts in the tender mind of a child. In an equally large number of cases, the role of the parents, including their attitudes to conduct, may be responsible for poor mental health in children. A guidance programme has not only to inquire into the etiology of maladjustments in a child, but also to make sure that the child is sent back to a proper and positive environment. Hence, a full understanding of the family environment is necessary. The parents must be helped to understand the whole situation, particularly their own role, in the difficulties that have overtaken the child. They should also be willing to cooperate in creating a new atmosphere that will give confidence and emotional stability to a child. Thus we see the imperative need for parent education and cooperation.

Every parent has high hopes, and expectations for his child. The parent is almost always biased in favour of his child. Hence, it is a difficult proposition to persuade parents to accept the limitations and lack of particular abilities in their children. This fact is particularly pertinent in cases where children develop behaviour difficulties mainly because of the incompatible goals set them by their parents. Parents develop their own dreams for the attainments of their children and goad them to reach levels of attainment in different areas, for which the child may not be fitted. A sound guidance programme can be given only by convincing parents against their own dreams.

In some cases, a child's difficulties may be directly caused by the neurotic tendencies, and poor mental health of parents. The unnecessary fears, unhealthy attitudes, consistent anxiety resulting in unpredictable behaviour on the part of either parent may severely disturb child and by the sheer processes of contagion and induction, may produce in him severe disturbances.

Child Guidance Clinic

Realizing the importance of a guidance programme, several countries have guidance officers attached to most of their leading schools. There are also central child guidance clinics. The child guidance clinics will, of course, have greater scope for work with a comprehensive set-up and organization. Since the work of a guidance or consulting expert in a school is more or less similar to that of a clinic, we will give a brief description of the structure and function of a guidance clinic. The individual school officer may not have all the resources for dealing with difficult cases, which may need the services of other agencies too. In such cases, he may merely refer them to an organized child guidance clinic.

Child guidance is primarily the work of a psychologist who has a good clinical training and experience, but in view of the complexity of forces that shape and influence the growth-process of a child's mind, the work of the clinic can be done only by a team of specialists. The services of a medical psychiatrist, with a sound knowledge of child psychology, will be necessary in quite a number of cases. For parent and school contact, and to get a good picture of the child's social and physical environment, we have now developed a special agency called the social worker as part of a clinic. The social worker should also prove to be a good liaison officer. Such an officer must be trained in child psychology, and in methods of interviewing and, from the data obtained, must be able to present a dynamic picture of the background forces against which the child has developed particular characteristics, sound and unsound. The environment must be viewed and interpreted as a dynamic field of active forces. This officer should also be able to interpret the findings and therapeutic programmes, if any, with the child, to members of its family.

In most cases, which are not reported by a school officer, it is necessary for the social worker to obtain an account of the child's attainments and conduct at the school also. It must give a dynamic picture, bringing out the attitude of the child to its teachers and work and duties in the classroom, also the interpersonal relationships with classmates and other companions.

The clinical psychologist naturally assumes the major responsibility in dealing with a child, that is referred to the clinic. In addition to a knowledge of the environmental background, a complete picture of the personality make-up of the child should be obtained. This is primarily the task of the clinical psychologist and his assistants.

In addition to the interviews, the application of psychological tests must be relied upon to a large extent. Intelligence tests and personality tests suitable to the age and educational standards are applied. In addition, special diagnostic tests, such as drawing, painting and other projective tests are also used.

The results of all these tests are appropriately arranged and tabulated before they are interpreted. Psychographs and pen-pictures will, of course, be more useful than single numerical scores. It may not be possible to apply some of the tests with young children. In these cases, particularly valuable data might be obtained, by allowing them to play unobserved. For this purpose any good clinic will have observation rooms with different kinds of play materials, where the child can be left to carry on its own spontaneous play activities. These are observed through some such device as the one-way screen, and any interpretation of such data has to be on the basis of modern projective techniques of assessing personality.

These play rooms can also be used as therapeutic aids, with small children. The underlying principle is *catharsis* by which the child is able to work off its hostilities and pent-up emotional energy.

Some cases will also require medical attention, general and neurological. Exogenic mental defectives and those with an epileptic history often develop personality disorders and maladjustments such as severe irritability and cycloid behaviour. Proper neurological examinations and, in many cases EEG recordings, will be necessary in these cases. Hence, specially qualified medical staff with training in the functional disorder of the nervous system should be attached to any good clinic.

It is sometimes assumed that the psychologists working in a clinic should be mainly trained in psychometry and in the application of various tests. But by experience we find that for successful work, the psychologist must be quite versatile. He must, of course, be well versed in child psychology, psychometry, personality assessment, projective techniques as diagnostic and therapeutic tools and possess a sound knowledge of general psychology. In addition to these, he must be able to appreciate the sociological factors at work in that particular area and the social customs and manners of the different communities that he may have to serve. It should be clear from the introduction we have given to this article that an understanding of the various factors that go to maintain proper mental health in a particular society, is necessary before one can undertake any guidance programme.

One other important function of a guidance clinic in our country may also be mentioned. It so happens that we have only a very few centres in India engaged in studying the process of child development. Mental health concepts must bear close relationships with developmental norms, physical and psychological. It is a sad fact that we do not yet have these norms for our children. We mostly depend on the norms obtained for foreign children. Hence, it should be one of the functions of a child guidance clinic to undertake researches in these areas.

As we have said earlier, parents are not equipped with the fool-proof technique of child-rearing. From this point of view a guidance clinic is the best centre from which parent education programmes could be spread. A good clinic must take up such programmes, so that it serves not only the particular children referred to it, but also the community in general, thus really upholding the maxim, 'Prevention is better than cure'.

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PART III

ENVIRONMENTAL INFLUENCES ON CHILD DEVELOPMENT

13

ENVIRONMENTAL INFLUENCE ON CHILD DEVELOPMENT

E. G. Parameswaran

It is not surprising to find even the most recent textbook of psychology referring to the age-old controversy between nature and nurture. It is not necessary here to repeat even briefly the long history of this controversy. Unfortunately it look a long time to realize that heredity and environment can never be considered in isolation from each other. Heredity always exists in an environment. Every single gene is embedded in an environment which in turn exists in a wider environment and progressively so. Thus any separate consideration of hereditary influences is fraught with limitation. No doubt, attempts have been made to have an elaborate study of the comparative influences of hereditary environmental factors on the developing personality of the child. But the results of these experiments have often left one with contradictory conclusions. It may be said, however, that it is only in the matter of intelligence that at least some substantial evidence has been produced to show the contribution of heredity. With respect to personality variables, environment has, on the whole, been shown to be the more influential.

One may point out that even in well-controlled identical twin studies, the influence of environment has been under-estimated. These experiments failed to control the influence of the pre-natal environment. Further, even in studying post-natal environment, only the physical and objective features were considered. The psychological environment was totally ignored. One is today familiar with instances of mental deficiency caused by emotional blockage which shows the remarkable influence of the psychological environment, resulting from social psychological causes on even a function like intelligence for which a large hereditary contribution is claimed. Investigations on social and emotional development of the personality as well as clinical evidences amply demonstrate the influence of environment, particularly the social psychological environment on the developing personality. Anthropological studies have produced highly corroborative evidence (Benedict 10, Mead 94, Whiting & Child 139). A survey of the literature on this point leaves us in no doubt as to the paramount influence of environment on the child. This fact has already been realized by human history.

To emphasize the influence of environmnet is not to deny totally the influence of heredity. Human life always exists in an environment, and it is this which has the greatest influence on the developing personality. Heredity sets up an upper limit and probably a lower limit also. It is on this firm faith that education and democracy are based.

Conceptualization of Environment

The environment around us is complex in nature. It has various phases and is fluid, ever changing both in its actual content and in its significance for the developing organism. For purposes of research and study the environment has to be seen from different angles. One such angle is from its chronological order in the life of the organism. Another angle is from the intrinsic nature of the environment and the type of influence it exerts on the organism. Viewed from the first angle, the environment can be classified as pre-natal and post-natal. It must be pointed out that most investigators have concerned themselves with the post-natal environment. The pre-natal environment has become a subject of scientific investigation only in recent years, when it is pointed out that the fetus is susceptible and sensitive to stimulation (Spelt 125, Richards & Newberry 113, Sontag 123, Wallin and Riley 135).

From the second angle, environment can be classified as physical, social, personal-social and symbolic-social. The term physical refers to material surroundings like the size of the home, the appearance of the home, the available facilities, etc. The social environment includes the people around the organism who directly or indirectly have an influence on it. The personal-social environment is actually a part of the social environment. This term is used to describe that part of the social environment with which the organism is in intimate, constant and enduring relationship. Virtually, this means the family. The symbolic social environment includes social institutions, ideologies, myths, folklore, cultural norms, etc. The term psychological environment, however, denotes all the environments mentioned above inasmuch as they have an influence on the behaviour of the child. However, this term has derived a peculiar connotation since the work of Lewin (83). According to Lewin, the psychological environment is the only one which matters for studying behaviour. The term 'psychological environment', means the environment as it affects the behaviour processes of the individual. The distinction between psychological environment and the non-psychological environment becomes necessary, because the same environmental elements are capable of being perceived and reacted to differently by individual organisms. However, this term psychological environment has limited significance for the subject of the present chapter.

Conceptualization of Personality Development

In general, the process of personality development has been approached in two ways. The first approach may be called dimensional for various aspects of development like intellectual development, emotional development, social development are studied as they occur through the life-span. One major aim of this approach is the establishment of developmental norms. Such an approach has the advantage of continuity. The entire pattern of development can be studied in relation to the earlier and the later stages. The work of Gessel (48, 49) on this point is well-known. But such an approach fails to reveal information about the exact pattern of relationship among various dimensions of development. Personality is nothing but the pattern of inter-relationships among different dimensions. The dimensional approach is limited in its utility to understanding the development of the total personality. However, in addition to the already-mentioned advantage of continuity, the dimensional approach has the advantage of facilitating better-controlled experiment and study of the developmental process. The possibility of better control yields more accurate information about specific dimensions of development.

The second type of approach employed by workers like Hurlock (70) Goodenough (54) and others may be described as the 'stage approach'. Here the life-span is divided into different stages such as infancy, childhood, pre-adolescence, and adulthood; and research takes the form of investigating the general and total nature of the personality at each stage. The psychoanalytic studies of oral and phallic stages are examples. Non-analytic writers in child psychology have employed terms like pre-school, nursery, etc. Such an approach purports to answer questions like, what are the characteristics of infant emotion ? what is the nature of the adolescent personality ? The stage approach unlike the dimensional approach has the advantage of providing information about the total personality development. To offset this advantage, the stage approach suffers from a comparative lack of continuity and is less susceptible of fully controlled research and experiment.

Theories Regarding the Influence of the Environment on the Personality

In general, one may distinguish two broad types of theories in personality study, as described by Eysenck (40). The Nomethetic or behaviouristic, atomic approaches would naturally approach the problem by studying the effect of specific controlled environmental situations on specific localized reactions of the child, the classic example being Watson's approach. On the other hand, the ideographic, organismic and psychoanalytic approaches approach the problem by studying the influence of the environment on the total personality structure of the child. The anthropological studies of Mead (93, 94), Benedict (10), Erikson (37) and a host of others fall under this group. The 'stage approach' pointed out above supports the organismic and ideographic bias, while the dimensional approach, though not necessarily in a complete sense, at least partially is inclined towards the nomothetic approach to personality. Buhler (20) takes what may be described as an intermediary approach where she uses the term 'activities'. Buhler (19) writes: '———the behaviourists insisted that each reflex forming a component part of an activity should be isolated and considered separately in an accurate observation of behaviour.... The essential psychological units are not reflexes, whether occurring in a chain formation or grouped together in structural unity, but activities'. Buhler's statement is perhaps a true reflection. Very few studies have been made about the influence of the environment on specific reflexes, and even if they are made, they are not likely to have much meaning and utility. The ideographic approach, on the other hand, was employed widely, and has been found useful especially in clinical work. It is gratifying, however, to find that most studies on the influence of the environment on personality development in children, steer clear of the two approaches. Most of them take up for study, some functional units like 'speech', 'concept formation', etc., or clearly definable and meaningful units like 'aggression', 'social relations', 'intelligence', etc. (30, 32, 55, 85, 119). When, however, studies on the development of several such meaningful limits are made on the same individuals, side by side, over a stretch of time, one can expect the best results, i.e., a longitudinal multiphasic approach.

Studies on the Influence of Environment

THE ROOTS. Ever since the controversy between nature and nurture began to take serious turns, studies have been carried out on the influence of different types and aspects of environment. The development of functional psychology in the United States gave the original impetus to studies on the influence of environment. The behaviouristic school with its outright emphasis on environment as the sole conditioning factor in personality development, created a predominantly environmental bias in psychology. However, as already pointed out, the research outcome of the behaviouristically oriented psychologists on this point has been rather meagre, as by his own stipulation, the behaviourist has been largely confined to more limited laboratory experiments.

Really productive studies on the point, however, had to await the development of Freudian psychoanalysis and its impact on the anthropological works of Malinovsky (84), Mead (93, 94), Benedict (10), Kardiner (76), Whiting & Child (139) and Erikson (38). The emphasis laid by the Freudian theories on the importance of the early childhood environment in shaping individual character, has initiated a large amount of research. Work has been going on on analysing the extent of the influence of different aspects of environment on the developing personality. Though the Neo-Freuaian school has chosen to disagree with the actual details of the Freudian interpretation of the relationship between environment and the child, there is no dispute whatsoever regarding the importance of environment. The adoption of psychoanalytic formulations in anthropology has led to very productive studies regarding the influence of the larger cultural environment on the personality (Bendedict 10, Whiting & Child 139).

Yet another important source of study was the development of mental tests, particularly intelligence tests, which have given rise to a vast amount of research on the influence of environment (52). Last but not least, the development of social psychology as a 'field science' has produced much research on the influence of environment on the development of social attitudes in children (Lasker 80, Horowitz 69). Thus the problem of the influence of environment has been approached from more than one angle, the difference lying in the particular 'function' or aspect of behaviour studied, and in the methods employed. The findings have emanated from different theoretical frames of work regarding the manner and extent of the influence; all theories, however, agreeing unanimously on the paramount influence of environment, physical, and to a greater extent, social.

In fact with the recent developing interest on the influence of pre-natal environment, it has come to be realized increasingly that the influence of heredity in comparison with environment is much smaller than so far estimated.

NATURE OF STUDIES ON THE INFLUENCE OF ENVIRONMENT. Faithful to the concept of a multiple theoretical approach, the complexity of environment and human personality, investigations on the influence of environment have been carried out employing different methods and specific techniques dictated by methodology and the general approach of the investigator. As is to be expected, laboratory experiments have been rather few. On the whole, such studies if at all attempted, do not appear to hold any promise considering the wide and complex implication of the problem. For convenience, the majority of the investigations can be classified as follows :

1. Large-scale surveys with questionnaires, schedules, etc., e.g., Wallin, Sears, Varma.

2. More controlled studies with standardized tests of personality, intelligence, etc., e.g., Freeman, Holzinged, Sears, Wellman, Mehta, Baldwin.
3. Cross-cultural investigations of different types of environments, e.g., Erikson, Whiting & Child.
4. Clinical studies of individual cases of problem children. e.g., Freud, Spitz.
5. Case studies as part of cross-cultural investigations, e.g., Mead, Khatri.

One need not pause to point out that each such type of study has served the purpose, though not without limitations. In general, individual case studies probably provided the inspiration and theoretical frame work for the larger surveys and controlled investigations. The studies of Whiting and Child on the influence of weaning habits and toilet training practices owe their origins to Freud's postulations for individual cases. However, as things stand at present, larger surveys and controlled observations have far excelled individual case studies in number and scope. The case study method—it may be pointed out not without justification—is limited to clinics, and has been comparatively overlooked as a source of hypothesis. However, generalizations based on large-scale studies to be of use must be confirmed by case studies of individuals. The larger surveys and investigations certainly have the advantage of making possible the study of larger number of activities in relation to greater numbers and degrees of variation in different aspects of environment. Cross-cultural studies have been immensely valuable in verifying observations on the individual cases as well as providing information on the process of 'culturization'. In a country like India with a variety of sub-cultures, such cross sub-cultural studies are in fact absolute necessities.

A REVIEW OF SOME IMPORTANT STUDIES

An attempt is made to bring together some important studies carried out by different investigators on the problem. For purposes of the present chapter, the studies have been classified taking into account the aspect of environment and the particular aspect of the personality studied.

The Pre-natal Environment

Interest in the study of the pre-natal environment as a factor influencing the personality of the child has been a very recent development. The roots for this interest may be traced to increased understanding of the problem of mental deficiency and retarded development. Biologically-oriented students of the problem came across cases where accidents or traumatic experiences or toxic infection of the mother's body during pregnancy led to mental deficiency and retarded development in children. However, the possibility that unfavourable pre-natal environment could produce less noticeable and more psychological problems in the offspring is just being recognized. In addition, studies have suggested that even much less conspicuous elements of the pre-natal environment like anxiety of the mother, her attitude to the expected offspring, etc., could influence the child. This, perhaps, is one of the many instances where popular belief and superstition have been much ahead of science at least in India. Custom and tradition had probably realized this by enjoining restrictions on the activities of the expectant mother and providing opportunities to make her 'happy'. Some of the studies suggest that there is probably an element of truth in popular wisdom.

Montague (97) in his excellent summary of the studies on the subject, has shown that there is enough evidence to show that the fetus reacts to stimuli. Some of the studies by the Fels Research Institute as quoted by Belum (9) show that infants of mothers experiencing severe emotional shocks during pregnancy tend to show heightened activity. The studies of Kentworthy (77) and Harris & Harris (58) also suggest that fatigue in the mother is related to hyper-activity of the fetus. Of several such factors listed by Montague are the nutritional states, infections, age, etc., of the mother. Based on these findings, one may conclude with Sontag (124) that the psychological condition of the mother during pregnancy affects the behaviour of the fetus.

Apart from these studies, attempts have been made to explore the possible relationship between pre-natal experience and later personality development. Such studies, of course, suffer from several limitations, especially when attempts are made to link pre-natal experience with behaviour of adults, adolescents and children. In such cases it is almost impossible to eliminate the influence of all possible factors of post-natal environment before one can safely credit the causative influence to pre-natal factors. As such, the evidence produced by such studies but indicate a potential field of research. The observation of Hall and Mohr (57) for example, suggests that premature births may result in cases where mothers show an unfavourable attitude to the fact of having children. Sontag (123, 124) suggests that there may be associations between pre-natal disturbance and subsequent symptoms of irritability, crying, etc., in the new-born. Richards and Newberry (113) have tried to show that fetuses that were hyperactive during the later half of the fetal period are likely to show a faster rate of motor-development as infants.

In another type of investigation, Wallin and Riley (135) employing a questionnaire on 100 mothers tried to relate the mothers' reaction to pregnancy to the adjustment of the infant. Out of the 100 mothers, 63 had only one child, while the other 37 had two children. In the latter case, there was significant correspondene between the mother's reaction to pregnancy and the infant's adjustment score. This study is also suggestive of the influence of pre-natal environment on the infant's adjustment.

On the whole, the cited studies,though suggestive, are far from being conclusive. A larger series of observations and studies are needed before any definite conclusion can be arrived at. On the other hand, these studies point to the fact that the environmental influence starts very early in the life time and the influence itself does not start necessarily only after birth. Research on the subject is likely to be useful from the point of view of counselling young and expectant mothers.

The Post-Natal Environment

The process of birth brings the individual into an environment which is much wider, much more complex, and demands active transaction on the part of the infant to some degree. In Freudian language, from now on, the sense of omnipotence has gradually to give way in the face of the reality principle and the process of reality testing. The reality itself is nothing but the environment in its different forms—physical, social, direct, indirect, immediate and remote. It is in this field of reality that the child has to develop, and whether he is a normal or abnormal child depends on the way that specific realities impose themselves on the child. The most important part of the child's environment is the home. As Sigmund Freud has so characteristically put it, 'The family is the society in miniature'.

The Home

The home itself is a complex unit. The home environment includes other members of the home and the physical conditions of the home. It may be said with some justification that for the very young child the social objects of the home, especially the parents, are the most important from the point of view of the child's own personality development. The enormous influence of parents on the development of different aspects of the child's personality have been brought out by a number of investigations.

INFLUENCE OF PARENTS ON THE INTELLECTUAL DEVELOPMENT OF THE CHILD

A number of investigations has been carried out with the purpose of assessing the influence of the parents on the intellectual development of children. Such studies have taken the form of comparing the intelligence quotients of parents and children, the economic status of parents, the occupation of parents, etc. The results are cited as evidence for a close relationship between the intelligence of parents and their children on the commonsense assumption that parents from the professions have a higher intelligence quotient (Goodenough 51, Terman & Merill 132). But, on the whole, such studies suffer from some limitations when they attempt to interpret the parent's intelligence as a factor influencing the child's intelligence. Assuming that there is a relationship between the I.Q. of parents and children, this relationship may be due to (a) hereditary factors, of which role in the development of intelligence is generally accepted, or (b) other features of the home environment like the socio-economic status, the facilities available, etc. As for the latter point, it has been shown that the socio-economic status definitely affects the I.Q. level of children. Children from upper socio-economic strata have always been shown to have higher mean I.Qs.

Parental Influence on the General Psychological and Psychosocial Development

More fruitful, however, have been the studies on the influence of the parents' personalities, their attitudes and actual reactions to the child on the social and emotional development of children. Such studies without any doubt were inspired by the emphasis which Freud placed on parent-child relationship in the development of the personality. The stress of the psychoanalysts on the importance of the weaning pattern, toilet training, pattern of authority and similar other forms of parental behaviour, originally inspired a whole gamut of cross-cultural studies, (Mead 93, 94, Benedict 10), later followed by well-controlled investigations on the influence of specific parental behaviour on the behaviour of children. Among the most important items of parental behaviour studied are:

(a) The general personalities of the parents.
(b) Specific attitudes and behaviour of parents towards the child.
(c) Presence or absence of parents.
(d) Interrelationship between parents.

INFLUENCE OF THE GENERAL PERSONALITIES OF PARENTS

Most of the evidence regarding this comes from the clinic. This is only natural as it is difficult to subject mothers and fathers to empirical investigations in normal cases. Spitz (127) uses the term 'psychotoxic' to describe these abnormalities in children, which can be traced to wrong parent-child relationship, mainly due to pathological personalities of parents. Thus, a frustrated parent often reacts to the child with over-ambition and 'pushing up' behaviour which can lead to failures, frustrations and withdrawal behaviour in the child. An obsessive over-conscientious parent can produce a similar personality pattern in the child (Freud 47, Flugell 43, Phillips 103). Field (42) in his study has shown that children of mothers who are ill-adjusted in their marriage tended to show behaviour problems. Similar supporting studies have been carried out by Ingham (71). Escalona (39) reports that eight out of ten infants about four weeks old, refused the breast where the mother happened to be excitable, disturbed, tense and anxious.

Such studies on the influence of the personality of parents as such on children are mostly clinical in approach. Perhaps, this is the best and only possible approach. But such studies are not very helpful from the practical point of view. For example, it is not possible to make parents change their personalities to improve the personalities of their children. Most studies relate to the personality of the mother and not the father, probably for two reasons. The first, and more important reason, is that of convenience. The mother is probably more free in time to cooperate with the investigators, while the father is not usually so. The second reason is the presumption that the mother is more important, as she spends a greater amount of time with the child. The latter assumption, however, may be true of very young children and not older children. Generally, the assumption may not hold good in a culture like ours, where even though the father may not spend so much time with the child, he exercises a strong influence over him.

Specific Training Habits, Attitudes and Behaviour of the Parents

More profitable and well-controlled have been the investigations which have attempted to study the influence of specific child-training habits, child-training attitudes, amount of mothering, etc. Such studies have produced very profitable results. The inspiration for such studies can again be traced to psychoanalytic findings and the cultural studies by Mead (93, 94), Benedict (10), and others.

Influence of Child Training Method

In a broad sense, child training methods are prescribed by the cultural group to which the family belongs (Henry & Boggs 65). Hence, it is appropriate to consider these studies under the influence of culture. However, in a complex culture such uniformity is far from present. In cultures like ours which are fast changing, especially in joint families, conflicts about child training arise between grandparents and parents. It is customary to distinguish between authoritarian and democratic forms of child training. The former consists of strict rules and regulations while the latter includes consultations , discussion and explanations with the child (Baldwin 6). Several factors like age, rural-urban variation, (Stott 130), social class difference, (Hoeflin 66, Erickson 38) have been shown to influence child training and, as such, the personality of the child.

Symonds (131) in his excellent analysis has classified the parental attitude to child rearing along two dimensions–dominance-submission and acceptance-rejection. These two dimensions serve to cover most of the studies on this point though many of them have not explicitly based themselves on the classification of Symonds.

SOME STUDIES ON THE INFLUENCE OF DOMINANCE-SUBMISSION VARIATIONS

Innumerable studies have been carried out to investigate the influence of domineering and submissive attitudes of parents on the behaviour of children. In several instances, it has been shown that abnormalities in children were highly correlated with 'typical' maternal attitudes. Frazee (44), and Mckeown (92), in comparative studies of parental attitudes for schizophrenic and non-schizophrenic children with interviews and questionnaires found that mothers of schizophrenic children tended to be more demanding and hostile in their attitudes or very protective and indulgent. In many cases overt rejection of the child was also observed. Mark's (86) investigation on schizophrenic children showed that the mothers in these cases showed over-restrictiveness and also excessive devotion with indifference, thus showing a high degree of inconsistency in attitudes. Freeman and Grayson (45) also find evidence for subtle tendencies to dominate in the mothers of schizophrenic children. But such studies on schizophrenic children have definite limitations. Findings regarding the onset of schizophrenia cannot with certainty be attributed to maternal attitudes alone. Further, there is no way of assessing the extent of the importance of maternal attitudes. Secondly, it is possible that at least a portion of the unfavourable maternal attitudes in the mothers developed after their children became schizophrenic.

More interesting are the studies carried out on normal children. These studies are backed by better control and methodology. Merril's (95) investigation using an experimental approach showed that many mothers who observed their children performing a job, tended to become more authoritarian and critical if their children are criticized for their performance. The more interesting part was that there was a good correlation between frequency of maternal criticism and the amount of irritability and complaining behaviour by children. In addition to this, such children also tended to show aggression in other situations. Hollenberge and Sperry (67) in their study on aggressiveness in children found that children who were more frustrated and brought up in a more punitive atmosphere, showed a greater amount of aggressiveness compared to highly punitive, moderately punitive and low punitive atmosphere (Sears 118). Though in general school situations, the child from the moderate group showed more aggressiveness than the other groups, in doll-play situation the child from the high punitive group showed a much greater amount of aggression. The results show how over-restriction and punitiveness in parents result in building up latent aggression in children. The results are supported by Radke's (109) well-controlled study. Employing questionnaires and interviews to study the relationship between parental authority and child behaviour on parents of 43 nursery school children, Radke found that children from more autocratic homes tended to be more quarrelsome, demanding, non-compromising and very impulsive while children from democratic homes showed the opposite qualities.

Aggressiveness does not appear to be the only undesirable outcome of parental dominance, over-strictness and punitiveness. Levy's (82) investigation on maternal over-protection has shown that suitable parental domination also plays a part in producing abnormal dependency and timidity in children. Sears *et al.*, (118) in their study also showed a positive correlation between parental punitiveness and dependency in boys.

The studies of Ayer and Bernreuter (3) also show that children who are brought up under strict domineering and punitive parental attitudes tend to become more dependent. Watson's (136) study on young adults has shown that strict and punitive parental discipline tends to be associated with high guilt feelings. On the whole, the effect of very domineering or strict discipline may be well summarized as follows: 'The stricter the parents, the stronger may be the revolt and the more outrageous the 'hell raising' or the more submissive conformity to parents and priggish self-justification.' It has been noted in studies of delinquency that many a delinquent results from authoritarian over-strict discipline.

Positive evidence has been produced by a number of studies for the desirability of the democratic method of discipline. Baldwin's (6, 7) excellent studies have shown that children from democratic homes are more genial, sociable, assertive and extroverted. The studies of Sears and Radke already mentioned also support this.

INFLUENCE OF ACCEPTANCE-REJECTION BEHAVIOUR OF PARENTS

The next group of studies to be considered relate to what may be termed accepteance-rejction behaviour on the part of parents. The term is used by

Symonds (131) to categorize on a continuum, all the patterns of behaviour ranging from extreme indulgence and over-protection, on the one side, to over-rejection of the child on the other. As Symonds points out, both the extreme forms of parental behaviour tend to be associated with the development of undesirable patterns of behaviour in children. The classical study in this context is that of Levy (82) on maternal over-protection. Levy in an intense study of 20 children who had had excessive and prolonged babying, and who were indulged very much by parents, found that these children were often characterised by extreme dependency, timidity and submissiveness. All these qualities amount to an inability to face reality. Among these children, those who were at the same time dominated by parents also showed aggressiveness. Winter Bottom's investigation quoted by Watson (137) showed that high achievement motive in children correlated well with encouragement of independent behaviour by mothers. The studies of schizophrenic children by Frazee (44), Mckeown (92) and Mark (86), already quoted also showed that in a good number of cases, mothers of schizophrenic children tended to be over-indulgent and over-protective. Baldwin's (6, 7) study on nursery school children showed that children from indulgent homes tended to become dull, inactive and socially isolated. Indulgence and lenience on the part of parents can lead to anxiety and insecurity in children resulting in a sense of inadequacy. Colm (27) brings out these points clearly. Surprisingly, an Indian study by Varma (134) showed a contradictory result, i.e., mothers of well-adjusted children showed a greater degree of over-acceptance.

REJECTION. At the other end of over-indulgence and over-acceptance is the attitude of covert or overt rejections by parents. The effect of rejection by parents, as shown by studies, can be extremely injurious. Several studies have been made of the influence of rejection from cold detachment to extreme rejection. The studies of Shoben (121), Bakwin (5), and Bowlby (16), have all shown that when the children do not experience warm parental love, they develop considerable problems of adjustment which may range from aggression and dependence to serious mental disorders. Ribble's (111) outstanding studies on infants who had been deprived of mothering due to different reasons, have shown how children who have not been mothered adequately can develop different symptoms of problem behaviour. The studies of Baldwin (6) comparing children from rejectant and acceptant homes also showed that children from rejectant homes tended to be more aggressive. Wittenborn's (141) study showed that parental rejection also tends to produce a greater amount of dependency. The studies of Sears (118) already mentioned have also shown that coldness on the part of parents especially the mother, is often associated with feeding problems, bedwetting, emotional upset and also slowing-down of moral development (Newell 101, Hattwick 61, Cummings 28, Martin 87). Several studies on delinquent children have also found a close association between delinquent behaviour, and deprivation of parental affection and acceptance. Varma's (134) Indian study has shown that on the whole, mothers of maladjusted children tended to show a greater amount of the 'rejection' attitude. (This study is referred to in detail in another section of this book).

The more interesting finding about the influence of parental attitudes is that more than over-dominance or over-rejection, what affects the child's personality most adversely is inconsistency in discipline. Parents who are uniformly strict or uniformly indulgent cause much less harm than parents who behave in an unpredictable and unstable manner, sometimes very punitive and sometime over-indulgent (Havighurst 62). A consistent discipline helps a child to more stable form of adjustment than inconsistent discipline which creates a feeling of insecurity and, as such, problems of identification.

Relation Between Parents

A source of problem closely related to the problem of inconsistency is that of poor relations between the parents. The child's development in the family environment takes place according to the field pattern. The structure of the field depends not only on the forces impinging upon the child, but also on the relationship existing between the persons who influence the child. Studies have shown that poorly-matched parents affect the child's development very badly (Symonds 131). In such studies the parents have shown a clear lack of healthy adjustment to each other, namely, sexual maladjustment, a clash of interest or personality, etc. In such cases, an attitude of rejection or inconsistent discipline results leading to problem behaviour in children (Porter 106, Newell 101). In extreme cases this leads to a condition of 'broken home' with severe effects on the child. The excellent study of Helay and Bronner (64) on delinquency has brought out the importance of broken homes in the causation of delinquency. The importance of broken homes is too obvious to be dealt with at length (Beala 8, Despert 34). Several studies have shown the influence of broken homes on the moral development of children (Clark 25, Jones 75). In these studies broken homes have been shown to retard moral development in children.

Closely related to parental discord is the factor of separation or absence of one or both the parents. In fact, a home where one parent is absent, often tends to become a broken home. One of the important results of parental separation is 'inadequate' mothering which results where the mother is the absent parent. The absence of the mother produces all the symptoms of insecurity, craving for affection, etc. The effect of inadequate mothering has been brought out well by Ribble's (113) studies. Mothers satisfy not only physical requirements and guidance, but also psychological needs of emotional warmth, affection and acceptance, which baby-sitters or step-mothers can scarcely supply.

A few studies on the father absent from home have shown some important results. Sear's *et al.*, (116, 117) in their investigation have found that boys from father-absent homes expressed more aggression against the male dolls than boys from father-present homes. Bach's (4) investigation has confirmed the findings. However, in this study only aggressiveness was the focus and hence, perhaps, the results in favour of fathers absent from homes.

Summary

On the whole, the brief survey of some of the researches on the influence of parents leaves one in no doubt as to the influence of parents on the developing personality. Children from homes where parent-child relations are adequate, definitely show a better personality. This influence is bound to be greater in our culture where parent-offspring relation is important to a much greater degree than in a western culture. Also, the bonds persist for a longer period of life.

Extreme dominance or rejection may not be a frequent feature in a child-centred society like ours. But, on the other hand, the problem of inconsistency in discipline, over-indulgence, etc., are likely to be more serious. The set pattern of father-dominance may to a large extent reduce overt parental discord, but increase covert parental discord. The comparatively great helplessness of the mother in the face of unhealthy adjustment with the husband can often lead her to be more possessive and over-expectant towards the child.

OTHER FEATURES OF THE HOME

Parents are certainly more important than any other element in the family. But the other elements do play their part. These may be classified as social and non-social. Social elements include grandparents, siblings and others, while non-social elements include all aspects of the home which are not 'human beings'.

Non-Parental Social Elements

The social elements of the home are many in number, but most important of these, other than parents, are siblings and the grandparents. Both these elements are more important sources of influence in India where the spirit of the joint family still persists.

SIBLINGS

Several investigations have been carried out on the influence of siblings on the developing personality of the child. The presence of siblings has been found to have both a positive and a negative influence, depending on the personalities of siblings, the number of siblings and the parents' attitude to different siblings, etc.

Most important from the point of view of the influence of siblings are the studies regarding the 'only child.' In some studies, one finds the effects of absence of siblings. The 'only child' has almost become a legendary figure in psychology since the work of Adler. The only child as shown by studies is more often than not problematic. Even as far back as 1907, Stanely Hall (56) stressed the disadvantage of being the only child, calling it a 'disease in iteself.' But more recently it has been shown that in instances where children have problems, it is not the factor of 'onlyness' alone which is operative, but several other factors (Stott 128). In more recent investigations enough evidence has been produced to show that 'only children' are not in any way more problematic (Goodenough and Leahy 53, Bonney 13). Stott's study (128) has shown that 'only children' from rural homes tend to experience greater problems of adjustment than 'only children' from cities. On the whole the slight mal-developments like a greater degree of neuroticism, irritability, etc., noticed in 'only children' when they are young tend to disappear when they move with more children outside and grow up (Fenton 41, Carter 24, Dyer 35). The investigations of Jameson (73) and Rose (114) have shown that in many instances only children make better adjustment as adolescents than children with siblings. In fact, according to Bossard (15) there is a greater likelihood of only children successfully assuming leadership among the group.

Concerning the size of the family, several studies have been carried out to stress the influence of the size of the families. On the whole, studies have classified the families as small, medium or large, depending on the number of children. The medium-size family as observed by Ellis and Beechley (36) appears to produce the best result. The large and small families have been shown to have both advantages and disadvantages. Bossard (15) points out that while the small families secure the greater economic advantages, they also lead to problems of over-protection and emotional involvement producing tension in the child. But Damrin's (29) observations show that in spite of these, children from small families are superior.

Large families, on the other hand, provide less economic advantages but greater ease of weaning from parental influence, social adjustment and growth of independence. It may also help the child in forming cooperative attitudes. At the same time, it may lead to a greater amount of rejection, hostility, lack of affection, etc. The most important disadvantage of the large family appears to be the economic factor which may affect the parents' dominance-and-acceptance-behaviour. On the whole, the studies on this point appear to be inconclusive, pointing to advantages and disadvantages.

GRANDPARENTS AND OTHER RELATIVES

Of particular significance especially in our culture are the studies on the influence of grandparents. The joint family system which has deep roots in our country, is beginning to wither and these studies are, therefore, of much importance. From purely hypothetical position again, the presence of other members may be expected to produce both advantages and disadvantages. In the first place, grandparents can often serve as guides to parents in bringing up children. They can provide affection, acceptance and security, which parents may not or cannot afford. Further, it is often the grandparents who introduce the child to the group more by relating parables, stories, etc. In many instances, the grandparents also act as companions to a child. On the other hand, grandparents and parents may be in conflict on the upbringing of the child. Such situations can produce confusion for the child. The grandparents may even use the child as an ally against the parents, especially in a mother-in-law—daughter-in-law conflict. The child may be made to rebel against the parent. Studies on these points have been few and far between; yet this is perhaps one of the most important fields of profitable research. Koller (79) observes that a three-generation family often produces a conflicting and confusing picture to the child. Conflict between grandparents and grandchildren on values and also between parents and grandparents produce very difficult situations of adjustments (Borden 14, Bossard 15). The attempt of Khatri (78) using case study methods to study the influence of joint and single families is very important. Khatri points out that the joint family provided for easy formation of personal education in boys while it made the situation more difficult for girls.

Non-Social Aspects

The following quotation can serve as an introduction to this section: 'Although the persons in the home dominate the environment of the young child, the equipment and physical provisions in and about their home, play their part in the training and development of character and personality.'

The quotation which is from the report of the White House Conference on Mental Health serves as an indication of the importance of the physical aspects of the home. These aspects of the home depend on the economic and educational status of the parents.

ECONOMIC STATUS

The importance of the economic status is so evident that it is scarcely an exaggeration to say that it is probably the most studied variable in relation to personality development. The economic status can affect personality development directly and indirectly. Directly, it introduces physical facilities and a greater amount of frustration. Indirectly, it may influence by affecting the parent personalities, and consequently their attitudes and relationship to the child (Buhler 21, McGuire 91, Havighurst 63). Thirdly, different social and economic backgrounds bring the child into contact with different schools, different types of neighbours, etc., all of which affect the personality development. It is impossible to make even a fairly adequate review of all the studies on this point. An attempt will be made only to indicate the wide scope of the problem.

One of the most important subjects in this connection is the almost proverbial 'middle class child.' Studies have shown that the middle class child experiences severe problems because the parents expect him to maintain the family status, which leads to neurosis and behaviour problems. This occurs in spite of the fact that the middle class parents generally accept their children, do not overprotect them and train them in the democratic way (Havighurst 62, Aberle and Naegele 1, Bossard 15). The same studies have shown that in the lower classes, children are punished more and treated with inconsistency. There is a greater amount of rejection and also parental disharmony, all affecting the normal development of child. Pusula (104) has shown that stealing money, etc., are more frequent in poor homes, while dependence, submissiveness, etc., mark children of a higher economic status.

Studies of intelligence have shown that children of a higher economic social status tend to show a higher mean I. Q. (Neff 99). But the results of these studies are not of much use because of the upper social economic bias in our intelligence tests. McCarthy's(89) study on language development has shown that vocabulary development is at a superior rate in children from rich homes. This is only natural in view of the greater number of stimulating opportunities in these homes.

Studies on moral development and character formation also show that, on the whole, children from poorer homes are likely to be less developed, both in the moral sense and moral behaviour (Hartshone and May 60, Harrower 59). Closely related to studies on moral development are studies on self-development and social development. Studies by Ames (2), Rabben (108) have shown that poor children learn to be aware of sex roles much earlier than higher class children. This is specially true of girls. The explanation advanced for this is as follows. At an early age, the girls in poorer homes are made to do work appropriate for women, while in the higher classes they are treated like boys for a longer period. In addition, studies have shown that children from rich homes tend to be more popular and acceptable socially (McDonald 90).

The economic status obviously influences the physical aspects of personality. In speech development the studies of Irwin (72) have shown significant differences between children of working class families and white collar families. Especially after the first 18 months of life, children from the latter group show a much higher development of speech. On the whole, studies on the socio-economic status of the home have pointed out the existence of clear-cut sub-cultures within a culture. These sub-cultural differences influence the family as a whole, the personality of the parents, their relationships to the child and naturally the development of the child (Davis 31). In India the class system is becoming a powerful source of variation and, as such, similar studies will be valuable.

EDUCATIONAL AND OCCUPATIONAL BACKGROUND OF PARENTS

The educational and occupational background are closely dependent on the economic background. Hence, it may be said that many of the conclusions regarding the influence of economic status apply to the occupational and educational backgrounds also. But the relationships stop after a certain period. Thus, in a rural town or a village, a rich landlord may be comparatively uneducated. On the other hand, an individual with a Master's degree is often a school master or a clerk. Hence, under the conditions of our society the correspondence between educational and economic status need not be perfect. Therefore, the educational background merits investigation as an independent environmental factor influencing the child's development. Here, again, we have studies to the point. But all the studies are carried out elsewhere and not in India. Considering a few such studies, Sheldon and Carrill (120) have found that parents with a higher education have children with better reading ability. Lack of encouragement of intellectual activities by the parents has been found to affect progress in school (Campbell 23). Such encouragement can be expected in greater measure from more educated parents. Not only this; on the whole better educated parents may be expected to be more democratic in child training (Roy 115). As a result of this, many of the problems occuring due to wrong parental attitudes may be averted. There is no need to repeat more studies on this problem as the point involved is evident.

Closely related to the economic and educational background is the occupational background of the parents. Reference has already been made to the studies of Goodenough and also to the data of Terman which confirm the fact of differences in mean I.Qs. of children from different occupations. More interesting are the results regarding the influence of parental occupation on the non-intellectual aspects of the personality. Very relevant in this context is the increasing number of mothers working. This last trend is developing fast in our country and its effects on the personality of the child have to be investigated. Commonsense will certainly hold that the mother's employment definitely deprives the child. Several investigations have advanced this view. Mohr (96) has made an excellent study of the problems which can result from women working. Again Bossard (15) points out the several disadvantages which can result from the fact of mother-workers, like the decrease in supervising, a reduced amount of maternal warmth for the child, etc. But Bossard also suggests that if the child is older, there need not be any serious psychological strain. On the other hand, Myrdal and Klein (98) in their study have shown that there is little difference in the amount of care given by the working and non-working mother. In one investigation in Madras, Jayalakshmi (74) found a greater prevalance of behaviour problems connected with dependency and withdrawal in children of working-mothers. On the whole, most psychological investigations have pointed out the disadvantages arising out of mothers working.

As to the influence of the occupations of parents, several attempts have been made to study the influence of specific father-occupations on different aspects of child personality. In the investigation on emotionally disturbed children, Bettelheim and Sylvester(11) have pointed out how parents' occupations can affect the child's development indirectly by affecting his position among his peers. Further, parents often try to project their own occupational attitudes to their children (Aberle & Naegele 1). Jobs which require families to be always on the move can create tension and difficulties of frequent re-adjustment in the child. In addition, a father or mother in a tiresome job can scarcely give the child the necessary affection and supervision in adequate degree.

Our survey of the studies regarding the influence of different aspects of the home in shaping the child's personality has pointed out the remarkable influence of home conditions. Especially important are the studies regarding parental attitudes and child training.

INSTITUTIONAL INFLUENCE

In many cases owing to separation from parents or for several other reasons children live in institutions like children's homes, orphanages, etc.

These institutions have also been shown to influence the personality of the child.

One of the earliest institutions to be studied was the foster-home with reference to its influence on the child's intelligence. Burk's (22) investigation shows very little correlation between the intelligence quotients of parents, and foster children. Skodak (122), in her study at the Iowa University, found that children placed at a very early age in superior foster-homes showed good gains in intelligence quotients. The conclusion on this point is indefinite.

More interesting are the studies on children admitted to institutions like orphanages. On the whole, these studies point to adverse effects. Such children have been found to be retarded in intellectual and emotional development and also in speech development. The studies of Ribble (111) and Spitz (127) already referred to and also the study of Freud and Burlingham (46) clearly point out emotional retardation in those children who have been institutionalised. McCarthy(89), in her study as well as Broadbeck and Irwin (17), in their study, have shown that institutionalised children are highly retarded in speech development. Lewis's study (81) has confirmed this. Goldfarb's (50) study on adolescents, who as children lived in orphanages, showed that these adolescents exhibited a greater frequency of problem-behaviour and also a lower I.Q. and lower social maturity. Rheingold (110) in her experimental study on mothering in institutional children found that when such children are given maternal affection, they make higher scores on the Cattell Intelligence Test; and show better postural and manipulatory behaviour. They also become more sociable.

In short, these studies show that institutionalisation tends to retard psychological development, because there is lack of emotional acceptance and also a lack of personal interest. The participation of children in life is less, and the environment is less stimulating. Goldfarb's work has shown that where the institutions provide better personal attention, the children are much better. Studies of this type are of great importance in India where such institutions are now developing. As it is, there are few institutions, and those that exist are inadequate. It may not be possible for economic reasons to improve facilities immediately. But it should be possible to educate staff to develop healthy child-rearing attitudes. Investigations on the prevailing attitudes and necessary changes are of primary importance.

CULTURAL INFLUENCE ON THE CHILD'S PERSONALITY

It is customary to define culture as the 'way of life' of a group of people. This definition in fact does justice to some important properties of any culture.

It is difficult to define culture more specifically, as it is nothing but the body of abstracted truths about the pattern of life, heritage, ideas and ideals of people. Culture pervades and in fact determines the nature and form of interpersonal relations, attitudes and behaviour of members of a particular society. In this sense it can very well be called 'second nature'. The child is born into its culture, as much as into its family, and the process of socialization is nothing but indoctrinating the child into its culture. What a child should be in his own eyes, in the eyes of his parents, in the eyes of others are all determined by culture. The stimulations and goals are provided by the culture. The way the child is handled, the facilities he has, are all dependent on the culture. As Kardiner (76) points out, culture provides the basic personality structure. The influence of different types of culture on the personality of the child has been well brought out by the cross-cultural studies of Benedict (10), Erikson (37) Whiting and Child(139) and several others. Within each culture, there are sub-cultures like class cultures, caste cultures, etc., which produce variations in the process of development. The influence of culture has been studied in several ways by investigators.

Influence of Culture-variations in Child Training

One of the earliest interests in this area was to study the effect of variations in child-training habits on the personality of the child. These studies were inspired by the work of anthropologists who were in turn inspired by Freudian writings. The pioneering work was that of Malinowski (84) on the Trobriand islanders. Malinowski found that the pattern of authority in the larger culture had a definite influence on the direction of the aggressive and affectional impulses of the child. Mead and Benedict, following this in the field studies of different cultures of compact and simple societies, showed how several characteristics in the individual member could be traced to the patterns of weaning, toilet-training and moralising found in each society. The cross-cultural studies of Whiting and Child have shown that fixations, dependence, guilt feelings are all related to early oral and anal indulgence. In her writings, Horney (68) has pointed out how the inconsistencies and confusion in value systems of modern culture produce 'basic anxiety' in the child. Stott's (129) study on rural and urban children has revealed a distinct difference in the personalities of children belonging to their different sub-cultures. The studies already referred to socio-economic class differences are also examples of the influence of different sub-cultures on the personalities of the individuals. Thus, it becomes apparent that the personality structure can scarcely be understood without reference to cultural standards and expectations. The classical study of Dennis (33) on the Hopi child has shown how even motor development is affected by cultural variations in child-training.

Besides variations in child-training, each culture has its own way of dealing with the specific problems like aggressiveness, sex, etc.; each of these affects the personality of the child. Thus in some cultures like the Zuni Indian, overt aggressiveness is permitted while among the Marquesans aggressiveness is not permitted. In our own modern culture, the lower classes permit aggressiveness to a great extent while the higher classes do not permit it. It has been shown that over-restriction of aggressiveness produces strong guilt feelings in the child. This is true too of sexual development. Children from the lower classes experience less intense trauma regarding sex matters than children from the higher classes. All these clearly point to the influence of culture on the personality of the child.

The Modern Culture and its Influence

A common feature of all advanced societies to-day is the movement towards 'modern culture'. This includes several features like urbanisation, industrialisation, the use of movies, television, radio, etc., smaller families, the instability of family life, increasing participation of women in work, etc. Each of these directions of change has its influence on the personality of the child directly or indirectly by influencing behaviour of the adults. Reference has already been made to the possible effects of 'mobility' in the family and culture. Studies of immigrant families have shown that children of such parents experience severe emotional strain. The influence of urbanisation is a new factor, at least in India. Urban culture introduces both advantages and disadvantages. On the one hand, it provides a much greater amount of intellectual and social stimulation. The movie, the radio and television all exert their influence. Studies on the influence of such agencies have shown interesting conclusions.

Such studies have shown both positive and negative conclusions. Thus, studies on the influence of the radio have shown that it increases the knowledge of children on current events, their vocabulary and often helps them in the formation of healthy ego ideals (Clark 26, Breckenridge and Vincent 18). The same studies and a few others also show that the radio affects physical conditions, produces nightmares and anxiety, and makes them irritable. The radio cuts into study efforts and also discourages children from active play; slang and bad words are acquired (Preston 107, Ricciuty 112, Podolsky 105). Similar effects have been found as regards television also (Podolsky 105, Weathers 138). On the other hand, favourable elements acquired from television tend to be permanent (Witty 142, 143, 144). The movies appear to affect the child considerably. The studies of Thurstone (133), Blumer (12) and Wiese and Cole (140) have shown this. Podolsky's (105) study, already referred to, has shown that the movie has adverse effects similar to radio and television.

Further influences of modernization of civilized cultures are those which occur through influencing family relations and the family identity. Wolfenstein(145) has pointed out how younger mothers change in their attitudes and values and, also, the relationship with children in a culture like the American culture which changes swiftly. In the modern culture family relations become less and less warm and more and more automatic. In a crowded city like Bombay the father leaves home before the child gets up in the morning and returns home late at night after the child has gone to bed. The problem is more serious if the mother also goes to work. These make it very difficult to form parent images; this may create conflicts between generations. The parents tend to have less control over the child, because the child has a fainter impression about them. Nursery schools or primary schools which tend to become mass institutions fail to produce necessary personal influence. Combined with all these is the gradual disappearance of the joint family system. All these provide a fertile soil for developing isolated, helpless and insecure personalities. Mechanisation and automation of economic life produce similar changes in mental life. All these changes affect the child by failing to provide for the necessary psychological needs. These tendencies which are characteristic of modern civilization tend to produce a uniform type of abnormality in different cultures. This does not mean that a simpler culture does not produce psychological disadvantages. Every culture, starting from the simplest to the most complex, may produce ill effects on the mental health. This has been well brought out by various contributions to Marwin Opler's (102) excellent volume. But civilization does not improve on the defects of an earlier culture. Such studies on cultural changes bear a degree of importance which cannot be exaggerated in the present condition of our country. Indian culture is in a period of transition and our national plans are seeking to change it. No doubt, greater production and greater economic comfort will result. But these do not guarantee better mental health and better children. The points mentioned above show that the psychological advantages of modern cultural change are not proportionate to the degree of change.

SUMMING-UP

An attempt has been made to review some of the studies relating to the influence of different aspects of the environment on the child's personality. It is, perhaps, not an exaggeration to say that there is no aspect of the child's personality which is not influenced by environment. The family, and within the family, the parents, and of the parents especially the mother, her attitudes and behaviour, have a profound influence on the developing child, as shown by studies on American culture. Similarly, the father, siblings, the larger social environment as well as non-social elements also have their influence. There is no reason to doubt that these environmental elements affect Indian children. At the same time there is no reason to presume that the precise effects are identical, as the influence of the specific aspects of the environment depend on the total cultural pattern. Hence, the need to carry out independent sets of investigations for each culture.

Research Done in India

The history of scientific psychology in India is rather short, and psychological research in general is meagre. In the areas considered in this chapter, this is evident. There has been very little research in child psychology except for a few isolated dissertations by individual students. Such studies are limited in control, extent and in depth. Research in this area has to be undertaken on a well coordinated and organized scale by agencies and institutions. In our culture, there are several sub-cultures which are diverse and yet similar. An effort must be made to analyse the uniformities and the variations. These form parts of a long-range project.

From the point of view of environment as discussed above, the following areas of research appear to be important: (*b*) surveys of child-rearing patterns and parental attitudes; (2) studies of factors influencing these patterns and attitudes; (3) formation of hypothesis regarding the influence of these patterns on the children in the context of the larger culture and testing them with suitable methods; (4) intense studies of our institutions, the psychological environment provided by them and their influence on the children; (5) the changes in family relationships brought about by urbanization and industrialization; (6) the influence of mobility of the family on the child, as well as on the family as a whole; (7) the influence of bi-lingual and multi-lingual environments on the child; (8) comparative studies of children from rural and urban, and single and joint families with regard to social, moral, intellectual development; and (9) the effects of the radio, movie, etc., on the moral, emotional and intellectual development of the child.

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PART IV

CHILD EDUCATION

14

PRE-SCHOOL EDUCATION

Rajammal P. Devadas

Children at the Pre-School Age

Pre-school children are those in the age group three to six years. These early years are the most important formative years of human life, because on them rests the entire span from childhood to old age. Early childhood lays all the foundations for the future. Pre-school children are very sensitive, and the impressions formed at this time last throughout life. This is also the period when habits are formed, behaviour patterns established, and attitudes towards life developed. This is the time when children need to get correct guidance and assistance to help their growth, good opportunities to release their energies creatively and to express their talents and inclinations constructively, without any inhibitory procedures or indoctrinations.

Children at the pre-school stage grow and develop through two processes: maturation and learning. Although learning can be accelerated by people and objects in the child's environment, the steps in maturation can be neither telescoped nor skipped. All children go through the same pattern of development even though there may be wide variation in the rate of development among individual children. This holds true for physical as well as emotional (or personality) development. A baby sits before he stands; creeps before he walks; walks before he talks; the 'terrible twos' give rise sequentially to the 'trusting threes', the 'frustrating fours', and the 'fascinating fives.' In this sequence of development, each step is built upon the preceding step. A child's readiness for subsequent developmental tasks depends, in a large measure, on his successful management of the tasks of the preceding stage.

The pre-school years have sometimes been called the period of first adolescence. It is the 'in-between' stage when children shift back and forth between babyhood and early childhood. Ruth Strang (21) portrays the pre-school years thus: 'During their third, fourth and fifth years, children grow rapidly—physically, mentally and socially. They gather information and put it together into patterns of knowledge that serve their purpose. They begin to work and play cooperatively with other children. In their play they show skill and ingenuity. These are the years of 'the flowering of the self.' By the end of the pre-school years, children will have gained enough independence and skill to hold their own in the elementary school.'

The pre-school child, whether he be two, three, four or five years old, is one who needs space to be vigorous, awkward, alone and part of an active group, for his happiness, concerns, and self-expression. He needs materials appropriate to his size, ideas, and feelings. He needs an understanding teacher to help him to help himself, to explore manually and verbally, and to learn the lessons of life from both people and objects. He needs children and adults outside his family, for as he rubs shoulders with them, disagrees or shares with them, and sometimes ignores them, he learns not to be threatened by them, not to exploit them or follow them blindly, but instead achieves constructive attitudes and abilities for living with others.

These rapid strides of development at the pre-school stages necessitate the provision of a suitable environment for the optimal development of children. In the past when the joint family system was the main pattern of family life in India, when families were large, when there was plenty of open space for the child to run about, and a number of children of the same age-group to play with, all his needs were met by the family itself. Today, numerous dynamic social changes are taking place, and the joint family system is breaking down. Nuclear families are springing up and are becoming smaller in size. Small living quarters make freedom of movement for young children limited. Economic pressures, impacts of education, social and national duties take many mothers away from the home during day time for careers or work outside. For these and many other reasons, the need for pre-school education through nursery schools is being increasingly recognized. Nursery schools for the pre-schoolers are gaining popularity all over the world.

Contributions from Post to Pre-school Education

The idea of pre-school education as such is not very new. More than 2,000 years ago, Plato stressed the benefits of education for the very young child. Since Plato's days, children have been cared for through many forms, and given guidance outside the home for diverse reasons. As early as 1654, recognizing the importance of early childhood education both in the home and school, Comenius gave to the world the idea of parent-education in his 'School of the Mother's Knee'. Among his teachings are truths recognized as fundamental even today. For example: 'Education is a development of the whole man. If the superstructure is not to totter, the foundation must be laid well, studies should be adapted to the capacity of the pupil' (19). Early in the 18th century 'Centres' for pre-school children in England were established to emphasize religious and moral discipline. Between 1810-1830, 'Infant Schools' were founded in Italy, Germany and England.

Rousseau emphasized the importance of children exercising their full right to childhood. 'Nature', he said, 'requires children to be children before they are men....... Childhood has its manner of seeing, perceiving and thinking, peculiar to itself; nothing is more absurd than our being anxious to substitute our own in its stead.' (19). Pestalozzi reiterated the principle of Comenius that, 'Things to be done should be learnt by doing them.' 'Knowing and doing,' said Pestalozzi, 'must proceed together ...... Spontaneity and self-activity are the necessary conditions under which the mind educates itself, and gains power and independence' (19).

In the latter part of the 19th century the 'Kindergarten' (meaning children's garden) movement instituted by Froebel became popular in Germany. 'Come let us live with our children,' (19) said Friedrich Froebel in 1837; and out of this philosophy has grown the concept of today's kindergarten, in which the development of the individual is aimed at through play activities. To Froebel and his followers, this development came through the use of symbolic materials. These schools, theoretically at least, were for the purpose of helping children develop their latent potentialities. The stereotyped manner in which these materials were presented to children by his followers and the rigidity of their use later defeated the very purpose of the kindergarten, that is, the growth of the individual through experiment and exploration. However, 'Kindergarten' schools may be considered the forerunners of the modern pre-schools, since they represented the first attempts at all-round childhood education.

The terminology 'Nursery School' is British in origin. The first nursery school was established in London in 1909, by two sisters, Margaret and Rachel McMillan, with the object of caring for the neglected children of poor parents. Therefore, they planned their nursery school programmes stressing health, cleanliness and the proper feeding of children. The school was thus largely custodial, and did not carry the meaning of 'Nursery School' as we understand the term today. However, the nursery schools established by the McMillan sisters may be considered the forerunners of the nursery schools of the U.S.A.

At about the same time, Dr. Maria Montessori, a young woman physician in Italy, was appalled at the neglect of children in the tenements of working class mothers, and established schools where children were encouraged to use various materials for developing their motor and mental skills. Her philosophy that 'busy' children were 'happy' children, and that 'no child can be free unless he can be independent' have an important bearing on the concepts of child guidance even at the present time. Dr. Maria Montessori named the pre-school as a 'CASA BAMBINI', that is, 'Children's Home', meaning that nursery schools must be like a home to children. The same meaning is implicit in the Indian word, 'BAL GHAR'. This name implies that in a nursery school, the atmosphere is not strict, formal or business like, but affectionate and intimate as in a home. Children can lie down, roll on a carpet, or even go to sleep, if they are so inclined. There are no awe-inspiring teachers. In their place, friendly sisters play with them and share their joys and sorrows. The elaborate system of didactic apparatus which Montessori developed was devised to help the feeble-minded child become physically independent. Doubts were raised about their use with normal children who learn independence through the normal activities of daily living. At first Montessori's venture in pre-school education prospered far better in other European countries than in Italy. Today, some of the merits of her views are recognized throughout the world.

In the U.S.A., the growth of pre-school education has been so spontaneous that it is difficult to trace its origin accurately. The influence of the McMillan sisters was significant in starting nursery schools. Impetus was also gained from a variety of organizations with similar interests in child welfare.

With Robert Owen, who establised an 'Infant School' in Scotland, and later with the socialist experiment in New Harmony, Indiana, U.S.A., came the idea that young children should spend as much time as possible out-of-doors, so that one could learn when their curiosity induced them to ask questions.

It was leaders like Patty Smith Hill, Anna Bryan and Alice Temple who, under the influence of the teaching of John Dewey, started to modify the kindergarten system of European domination. 'Come, let us live with our children' began to assume new meaning as Dewey's philosophy of education, and tenets, "Education is not preparation for life, but is life. The firsthand 'here and now' experiences of the child which make up his curriculum are the basis of his learning" took root in education.

Since the latter part of the last century, 'Day Care' centres have existed in urban areas in the United States. A 'Day Care Centre' is generally maintained for the convenience of working parents, and is often in the charge of persons who have had little or no training in child development and guidance. The programme offered at such centres might have been structured beyond the developmental level of the children who attended them, or there might not have been any definite planning at all. Some of them could be described as 'group baby-sitting' centres.

Recent Trends in Pre-school Education

From the contributions of the past have grown several important ideas which today influence early childhood education. They are: the school is a cultural agency; the school offers excellent opportunities for an experimental approach to education; the school supplements the home, and therefore is based on the co-operative planning of teachers and parents.

Today, the study of the child, his interests, needs, nature of growth and development have become the basis for planning education in the early years. Stereotyped symbolic materials have given way to flexible play materials, that challenge and promote the child's thinking. Pre-school children are free to explore, and in so doing, build concepts which lead eventually to understanding of ideas expressed in books and other abstract sources. Schools for young children extend Comenius' ideas of parent-education to include home, school, and community in childhood education.

The purpose of pre-school education today is to help the child to explore and know his world, to discover himself, and to become acquainted with many sources from which he can learn. His never-ending questions are answered through self-activity; through first-hand observation and experiment; through interaction with other children and adults; through the skilful guidance of a teacher who makes use of his activities, his questions and his discoveries in planning for his further growth and development. As the child builds strength and confidence in his own skills and powers, as he discovers and interacts with his world of objects and people, he is building concepts which will help in the years to come.

A comparatively new type of pre-school institution exists today mainly for the purpose of scientific study of young children. These research centres are part of large universities, and are closely associated with departments of Home Science, Psychology, Education, Medicine or Sociology. With these research centre type of nursery schools, are teacher-training institutions, to prepare teachers for nursery education. Many factories and industries also own and operate creches for the care of young children, as required by the Factory Acts. In the United States, they are planned and operated by well-trained professional personnel.

The Importance of Pre-school Education

Pre-school institutions are important because *the children are ready*. They are bursting with energy and curiosity; they are eager; and they have reached a new stage in their lives, when stimulation, adventure, ideas, challenge and companionship have begun to be of the utmost importance.

The experience of nursery schools and kindergartens of nearly 150 years show that children come eagerly to the pre-school. They love their parents, and their homes. At the same time, they seek friends of their own age, new types of activity and experience. These children are not tied to their mothers' '*pallu*', but are busy workers, hard thinkers and delightfully social.

They are ready for experiences with an increasing measure of independence. They are eager for companionship, to meet, talk and work side-by-side with others of their own age. They are growing up to use their bodies; to test their strength, to climb new heights and to achieve new successes. They are thirsty for ideas, new words, new sounds, new sights, new skills and accomplishments. They are full of ideas of their own—ideas to converse if someone will listen, ideas to point out and act out, and ideas to build with, if they have the tools, materials, time and space.

THE MODERN NURSERY SCHOOL

The modern nursery school has been defined as, 'A school whose programme and environment are primarily suited to the educational needs of pre-school children.' A nursery school is a place with indoor and outdoor space which cares for a group of children from approximately two-and-a-half or three to five years for not less than two hours a day, and where a guided and supervised programme is conducted by specially trained teachers to promote educational objectives through the use of well-designed equipment, materials and meaningfully planned activities.

The enriched experience which children have in pre-school, produces lasting good results. They pound at work benches, diligently planning ships and planes and cars. They get engrossed at work on easels. Fearlessly they climb high on jungle gyms. With care, precision and detail, they plan varied structures of blocks. They milk cows, sit in the cockpits of planes, ride on tractors, climb on fire engines and sit in police cars. They hear stories, sing songs, dance and create music of their own. They cook, bake, serve meals, dig gardens and mix cement for their own stone-wall. They bathe babies, feed rabbits, and watch hens' eggs hatch. They pedal on their tricycles. Earnestly, seriously, with complete identification, they 'play' doctor, digger, policeman, conductor, shopper, storekeeper, mother and father. These early lessons and the experiences which the children gain through the nursery school make a deep impression on their minds.

Aims and Objectives of Nursery School Education

Louise M. Langford points out that a good programme of nursery education should be based on four broad objectives:

1. Providing for the Child's Physical Well-being. A nursery school should aim at providing for the child's physical well-being by protecting his health and safety; by providing nutritious food; by setting aside time for sleep and elimination; by providing space for free movement and for practising bodily control, and by giving time for rest and relaxation.

2. Satisfying the Educational Needs. A nursery school should aim at satisfying the educational needs of the pre-school child by providing equipment and materials which are interesting and stimulating; by allowing each child to express his interests through materials, language and music; by furnishing new experiences closely related to the child's day-to-day living, and geared to his ability and readiness.

3. Catering for Social Development. The nursery school should aim at providing for social learning by recognizing the child's need to get along with other children and elders; by providing materials which enable children to enjoy sharing and playing together; and by helping the child to develop as an acceptable member of a group.

4. Sponsoring Emotional Growth. Every child needs affection, acceptance and approval. A child can survive and grow only if he is loved. Infants who have the security of warm, maternal love grow and develop at rates which may exceed normal expectations. But in children who have been deprived of maternal love, regression in physical, intellectual and emotional development is so severe as to lead to irreversible retardation, or in extreme cases even death.

Acceptance of a child as a unique human being in his own right is vital to his healthy development. Short or tall, chubby or skinny, fair or dark, he needs to be taken at face value for his own worth. In this way he develops an awareness of himself as a special, distinct person in the eyes of the adults around him. The image he builds of himself as he matures is derived from the ways he is regarded by adults of importance to him in his growing years. If, in the early years, a child is helped to grow through affection, acceptance and approval, he will be able to achieve the ability to adjust to any situation.

The nursery school should aim at providing for the child's emotional growth by making him feel needed and wanted; by inculcating into him the security of belonging; by helping him to become independent; by accepting him, and respecting his feelings; and by guiding him towards expressing or releazing his feelings in acceptable ways.

These objectives reflect the changes which have occurred in the system of education. Not many generations ago, education was thought of as something imposed on a person. It was often not related to the learner's living conditions or experiences. The school was a place where reading, writing and arithmetic were considered to be the most important subjects. As education became more and more identified with actual living, the teaching-learning process was integrated with the social and emotional areas, as well as the intellectual. Modern nursery schools aim at, and plan for the all-round personality development of children, without leaving it to chance. The child, before reaching six years of age, may not be ready to learn to read, but he is ready to, and will inevitably learn ways of handling his emotions and feelings. These learnings will influence his behaviour throughout his life. Therefore, the nursery school should try to offer the child positive opportunities and situations to grow and develop in all aspects along right lines.

Organization of the Nursery School

Organization is the sum total of planning and is a means towards an end. In the nursery school, that end is the creation of the physical and psychological atmosphere in which every child thrives.

In the organization of the nursery school, the fact that the nursery school is an extension of the home for the children of the same age should be the basis. The nursery school is not a school where children sit in the class, listen to the teacher patiently, and learn what is taught. Formal behaviour is not expected in the nursery school. The child should feel that the nursery school is his bigger home equipped with the play materials he needs, offering him opportunities to play with children of his age. While his own house is a smaller home for him, where the near and dear relations of different ages live together, he should love to spend most of his time at a nursery school in the company of other children, and of the teachers who, like elder sisters, love him, help him, provide interesting experiences, tell stories, sing songs, and eat and play with him.

The pre-school fulfils the special needs of children. Here children play, handle things and make use of the aids provided, without fear of being scolded.

There are no punishments for breakages or mistakes. They can move about and do what they are longing to do with full confidence and feeling that they are handling things that belong to them. This atmosphere of freedom from fear and anxiety is a great help to the healthy growth of the mind and body. Thus, the nursery school is a place of rest, play and satisfaction for the inner urges of children.

In a well-organized and conducted nursery school, the thousand detailed responses of every child fit into the total behaviour of the whole school, as into one organism. The teachers and other instructors know what they are expected to do; the programme is planned in advance and is carried out as scheduled; the buildings and equipment are adequate and maintained in good order; nutritious food is supplied; children's behaviour is positive, happy and loving; the parents are satisfied; and the records are kept up to date.

There are three reasons why a nursery school must be properly organized: first, organization promotes growth of the school as an educational institution. The educational objective cannot be reached unless all efforts are coordinated. Organization also helps the school to demonstrate, evaluate and learn what types of experiences and situations produce the desired results. In order to evaluate what is actually being done, every aspect of school life needs to be thought out, discussed and defined in terms of planned action.

Second, the nature of the children's demands on the environment and other persons, makes organization an indispensable pre-requisite to success. In general, children like stability in their environment and in other people, while they themselves display instability. Because they must accept much unstable behaviour from each other, it is essential that the environment, and the behaviour of adults in the nursery school gives them a stabilizing influence. Stabilization can be brought about only by good organization of all the activities in the school.

Third, the need for team-work among teachers requires that school life be well-organized. The varying temperaments of teachers must be blended into a unified whole in order to create a wholesome and affectionate school atmosphere. Good organization helps to iron out temperamental differences, and to channelize them into positive influences on the children. The nursery school organization will help teachers to become fully aware of all the details, and develop intuitive insights.

Organizational Factors in Pre-school Education.

1. THE ADMINISTRATOR. The major factor to be considered in developing a good nursery school is the selection of the person to be in charge

of its organization. If an unintuitive, so-called 'practical' or 'down to earth' administrator makes the rules and regulations which are easy for adults to follow, but are of dubious value for children, the organization may become too formal and stiff, lacking the atmosphere of freedom which is so essential for the development of children. On the other hand, if a predominantly imaginative person is not able to make sufficiently concrete rules, the administration of the school may tend to be at sixes and sevens, in spite of its apparent organization. Therefore, it is essential that the organizer should be one who understands how to integrate the institutional needs of the school and the emotional needs of the children in her overall planning, so as to produce the optimum conditions for the development of children.

2. The Nursery School Staff. The nature and function of the particular school will determine the professional staff needed. In a large nursery school associated with a Home Science college, Research Institute or University department, specialized services may be provided by experts in addition to those of the teachers employed in the nursery school. In smaller schools, a well-trained teacher may assume responsibility for all the duties except the medical service. The staff organization of a typical nursery school should consist of:

(a) THE DIRECTOR: who has the administrative responsibility of the school. Her time is devoted partly to the supervision of the nursery school and partly to other departmental duties. She determines the general policies of the school, coordinates the work with children, parents, teachers and student trainees in such a way that the interests of all are served. She recommends staff appointments, outlines the budget, and guides the educational programme. The director also keeps in touch with the parents through parent discussions and meetings.

(b) THE HEAD TEACHER: The head teacher is directly responsible for ensuring that satisfactory conditions prevail in the nursery school for carrying out the programme, by her supervising and house-keeping duties and maintenance of equipment. She is also responsible for the well-being and progress of the group of children under her care, and makes final decisions with regard to any matters that affect the group. She is in charge of the behaviour ratings of each child in her group, and for keeping records of their attendance and health. She may cooperate with specific research studies involving those records.

(c) OTHER STAFF. The number of assistant teachers depends on the number of children. The other personnel required are: a cook, a maid, and a gardener.

The Nursery School Plant

The nursery school building is an important factor in offering adequate learning possibilities within the school. It may extend or limit the experiences of the children according to its flexibility or limitations. The nursery school building influences the children in promoting independence and self-help through the provision of low hooks for towels, and toilets and wash basins reachable at their height. This will save time and effort for staff members so that they can be free to attend to other activities. Health is promoted by a proper neighbourhood, sanitary arrangements, ventilation and an easily cleaned floor. Safety is dependent on the provision of hazard-preventing measures in the building and in the play areas. The amount of space available influences the types of indoor and outdoor play activities in which the children can engage themselves. An attractive and pleasing atmosphere, with the colour and space that children love give them much satisfaction. For all these reasons, the plans for the nursery school building if new, or for its remodelling if old, must be carefully laid to serve the educational purpose.

Equipment in the Nursery School

The usefulness of equipment for the school children depends not so much on the amount of equipment, or the money available in the budget, but on the resourcefulness and imagination of the staff. There are minimum essentials to be fulfilled in equipment and these are for the most part raw materials which the children can use in various ways at different stages of their development. For example, a sand-box serves the two-and five-year olds equally well. It is used by all the age groups, with pleasure, but in diverse ways because of the creative possibilities it offers. Other essentials are wooden blocks of different sizes and shapes; boards and boxes; hammer and pegs; paints and easel; clay, dolls and home-making equipment. Items of equipment which promote large muscle activities such as tricycles and wagons, climbing devices like the jungle gym, slides and swings are also important. For indoor activities, books and manipulative materials, drums and bells, musical instruments, pictures and puzzles are useful. Housekeeping equipment serves both indoor and outdoor needs.

The minimum play essentials can be secured inexpensively through many ways. One good source is the local second-hand store, or junk-shop where one may find tyres of many sizes, old automobile steering wheels, inner-tubes, tyre pumps, old spoons, pans, strainers and containers. Gaily painted tin cans make desirable additions to the sand-box equipment. Variety and novelty in equipment are a good means of enriching children's experiences.

Arrangement of equipment is of the utmost importance. Harmony in group play depends on the way in which equipment is placed. An easel with room for two children provides for social as well as art-experiences. Adequate space in the doll corner encourages its use by more children, and reduces their conflicts. The use of wheel toys will depend upon the amount and type of hard surface area available. A broad walk which circles the playground will handle the traffic in a more satisfying manner, than that of a solid block of hard surface at one end of the playground. By providing carefully selected material and adequate arrangement for their use, the nursery school ensures a rich environment to stimulate and challenge children's social, emotional and intellectual development.

The Pre-school Curriculum

A good nursery school curriculum offers many learning opportunities for children, correlated with their readiness and interest. It needs to be carefully planned, based on the spontaneous interests of the children. A resourceful teacher will take advantage of all the chances children offer, and extend their experiences to areas in which they show interest. The experiences most desirable for children in the nursery school are:

1. MUSIC. Music is an important avenue for expression to children. Children everywhere love to sing. There is a deep significance in the concept of the mother as one who rocks the cradle and sings to her child towards attaining noble qualities. The melody of the mother's voice, the feeling and tones expressed by her, the rhythm of rocking, all make permanent, even if unconscious impressions on the child very early in his life. The 'music' of the voice is an important medium for communicating feelings. The child in the nursery school responds to the tone of the teacher's voice, as much as to the words she uses.

The musical expression of children can be encouraged by engaging them in satisfying activities involving rhythmic movements—swinging, bouncing, pounding, running or pedalling a tricycle. The teacher who can sing 'on the spot' and move freely to music will receive spontaneous responses from the children. Music goes with activity for children. Singing with the teacher gives the child practice and ability to carry a tune response to training, but the teacher must appreciate singing as a means of self-expression for the children, rather than as a skill. Where there is plenty of expression through music, children do not need to drain off their feelings in undesirable ways.

2. ARTS. Experiences with graphic and plastic arts offer another means through which children express their feelings, and find satisfactions.

Given an easel, paper and paint and no directions, every child paints something. In order to give free rein to the child's creative expression, making or setting models to be copied must be avoided. One must never say, 'Do it this way,' or 'Do it that way'. Even the drip from a full brush can make fascinating patterns on the paper. Left alone, children put down many of their experiences on paper, even though they may not give titles in terms of adult standards.

Clay offers opportunities for direct sensory experience. Children who have experienced conflicts over toilet training are especially likely to use clay for the release of their pent-up feelings. The squeezing, the patting and pounding they do with clay, serve to drain off some of the resentment which they may have been unable to express in other ways. Mud, sand and water, also offer similar values. Children, who use clay and finger paints, will have richer experiences, if they also know the feel of sand, both dry and wet, have messed with mud, and explored water play.

3. PLAY. To the young child, play is the most important thing in life. It even comes before eating and sleeping at times. In it, he tries himself out. He selects naturally the plaything that will help his stage of development most. Through play he builds strong leg muscles that will help him grow. He learns to use the large muscles of his arm and begins to touch and feel everything within reach. He picks things up and drops them. He takes his puzzle board apart and puts it back together again. He learns to coordinate his fingers, and gains skill in managing his body.

Children learn much about the world and about them while playing. They want to handle articles around them, taste food, pick up flowers and dig the soil. They take pans out of the cupboard and clothes out of the boxes. They are eager to know how everything feels and tastes.

In play, children learn that some boys are heavier than others; that different-sized blocks will not fit together; that a rubber ball bounces, a boat floats, a kite flies and a top spins. They learn to recognize colours. They try to imitate what other people do. They come to know that they will fall, if their balance is poor. They become afraid of things that will hurt. Sometimes they get pleasure from playing with the group. There they learn how to get others to cooperate. They become conscious of the need to share with others.

Through play, children develop their minds. They can concentrate on play, if they have much free-play time without interruption. Concentration helps children solve many problems in their play. They can build the blocks into a house that will stand. The houses will probably fall at first but, in time, by trial and error, the children will succeed.

Play offers many problems for solution and challenges the intellect: how to fit parts of the puzzle into the right spots; how to dress and undress the doll; how to remember to keep pedalling so as not to fall off the new two-wheeled bike; how to take turns at using play equipment; how to share ideas with playmates. A child will not be able to solve some problems, of course, until his mind and body can work together in coordination. This must wait on physical development. Play does much to help this coordination.

Play helps children to make decisions. Children's minds are developed through creative play—in making something out of things at hand. Creative play will come natural to most children, if they are surrounded with the proper things and tools. The 'do with' type of play equipment makes it necessary that a child decides what to do with it. 'Do with' articles are blocks, sand, water, cans, or boxes, finger paint or crayon plain paper, materials for crafts, costumes, instruments, kits for keeping stores. With these the child can experiment to his heart's content.

The mechanical toy winds up and rattles across the floor. It is not creative. It leaves nothing for the child to do but sit and watch. The real fun in play comes from doing or making something with the things he has to play with—from the feeling of having mastered materials at hand.

A child's play life can help him gain emotional balance. He gets satisfactions from learning to control his body and to build a good house of blocks. This makes him a happy little person. He learns to like the beauty of colours, the melody and rhythm of music. He overcomes the fear he feels when swinging high or riding fast. With finger paint and a piece of paper, he can put down what he feels—he can work out his feeling.

Play can be a means of helping the child to form good habits. If the playroom atmosphere is permissive enough, he can learn perseverance and originality. Besides, he can be taught respect for property and the rights of others. This comes from seeing that no one else uses his playthings without his permission. Certainly in group play, he will learn to share his toys with other children. He learns, in supervised games, to be a good loser as well as to play fairly. Habits of orderliness can grow out of having a place for his toys and helping to put them away at the end of the play period or before he goes to bed at night.

4. Dramatic Play. Just as on the stage of any theatre, dramatic play at the nursery school portrays the episodes and relationships that seem significant to the players—the children. The almost universal theme of the drama they enact is that of the family, with mother, father and baby as the

stars. As the child acts out his parts on the limited stage of the doll corner or sand box, he may also be draining off disturbing feelings; he may be reducing the amount of anxiety; or he may be re-creating a world which is easier for him to face, a world in which he can feel more adequate than he feels in the actual world. Because of these values, a good nursery school encourages dramatic play by careful planning and supervision. If the play is to have meaning for the child, children need help but not direction. Materials for home-making play seem to contain the most desirable qualities to encourage dramatic play.

5. LITERATURE AND TELLING STORIES. Experiences with books are also part of the daily programme of a nursery school. Books open up a new world for children. Their use and enjoyment are some of the most abiding joys of his life. Good books enrich his experience, increase and unify his knowledge and appeal to his humour, sympathy and imagination, offering him vicarious experience which might not be feasible for him in real life. It is the teacher's duty to foster the child's present enjoyment of books and lay the foundation for later appreciation of literature. She should also endeavour to encourage the child in the use of narrative and poetry as creative forms of expression.

Certain criteria need to be used in judging children's books for story-telling or pictorial purposes. These criteria pertain to the story's auditory aspects, intellectual content, emotional quality and suitability to the various age levels. If there are pictures to go with the story, the visual effects must also be evaluated.

Books and stories can be of great utility in entertaining, developing language, giving information, stimulating imagination, releasing emotional tensions and building character. To what extent all these aspects of growth will be promoted will depend upon how efficiently the teacher handles the technique of story telling or reading books for children.

6. SCIENCE. Experiences with animals and plants provide a valuable source of joy and learning. Observing or caring for young animals and plants teach children many facts about life and death.

7. TRIPS. Trips to places of interest outside the nursery school help to broaden the children's concepts, in the general area of social studies. In planning trips the teacher will keep in mind that the children will learn most if there are familiar elements which they can relate to the unfamiliar. Many of the most valuable experiences outside the school lead directly to variety and richness in the experiences within the school.

The Daily Programme in the Nursery School

The programme or the daily schedule in various nursery schools will vary according to their objectives, the main purpose for which parents send their children, the number of staff members, the number of children, and the facilities available. The programme for the day outlined here is one that has been adopted as the best after repeated experiment in a nursery school. This nursery school functions for five days a week, starting daily from 8.45 in the morning when the teacher opens the school doors. Some children, who are early-comers, may already be waiting for her. The programme for the children, however, starts at 9-30 a.m. Closing time for the children is 3.45 and for the teachers 4.45 p.m., when, after having tidied up the building, and prepared for the next day's work, the teacher goes home. The daily schedule is as follows:

	Forenoon
8.45 to 9.45	Arrival of the children; health inspection.
9.45 to 10.30	Outdoor play.
10.30 to 10.45	Toilet, washing and assembling for morning fruit juice.
10.45 to 11.00	Prayer, sharing experiences that may have happened at home.
11.00 to 11.45	Indoor games.
11.45 to 12.15	Music and group games.
	Afternoon
12.15 to 12.30	Toilet and getting ready for lunch.
12.30 to 1.00	Lunch.
1.00 to 2.45	Sleep and rest.
2.45 to 3.00	Toilet.
3.00 to 3.20	Story-telling.
3.20 to 3.40	Milk and fruits.
3.40 onwards	Outdoor games and getting ready to go home.

The whole programme is planned and executed with the idea of helping children to develop desirable habits in the routine situations of eating, sleeping and elimination, to build up feelings of confidence and adequacy, to channel hostile and aggressive feelings along socially acceptable ways, and, on the whole, to help in the development of wholesome well-adjusted personalities.

Outcomes of Pre-school Education

When children, who have attended the nursery school, graduate and pass on to the elementary school classes, the learning acquired, and the development achieved in the nursery school, have a particular bearing on their later progress. Many experiences which the children relished have incidentally contributed a wealth of background to study in the elementary or primary school, and have laid the foundations for the tool subjects—the proverbial three R's. This has come about, not by imposing any preparatory steps along the school journey, but because, as children live and work together, under wise teacher direction, they acquire intrinsically and permanently many types of learnings which are integrally linked with the future.

Through participation in free activities, the nursery school promotes the child's ability to think and solve problems on his own. All through school life, the ability to think through and solve problems is of untold benefit. The teacher's guidance in the manipulation of the many materials available, helps children to grow independent. They gain practical assurance that they can carry out their ideas with the [materials at hand. The child also gains the assurance that he can manage to be away from home, without the mother's hovering help. He knows that even in other environments under strange managements and differing rules, he can get along with safety. Thus he acquires a feeling of security that he is adequate to meet any experience.

The nursery school makes an important contribution towards the physical development and health of the pre-school child through the nutritionally planned meal programmes, and well-designed exercises. Pre-school attendance promotes social development because the child has many opportunities to accustom himself to social living with those of his own age and generation. Child psychologists like Jersild (12) have stressed that the emotional adjustment of the pre-school child is a significant outcome of nursery school participation.

Thus the nursery school lays the foundations for the child to increase his readiness for school; he has grown in ability to solve problems; he has gained independence in dealing with materials; he has learnt to navigate away from home surroundings; his muscular control is better; his social and emotional adjustments have progressed; and last but not least, his parents have lived through his pre-school days with him in such a way that they get a better picture of the child and his relationship to the school.

Cooperation between Home and the Nursery School

Good pre-school programmes have a unique chance to help parents to understand their children, how they grow and learn, why they behave as they do. Homes make a basic contribution to the pre-school groups, but home alone, even the best home—with its space, resources and time—does not satisfy and fulfil all their needs. Therefore, perceptive parents reach out to nursery schools to supplement the efforts of the home.

The activities of children in home and school are more closely related in the nursery years than in any other stage in education including even the kindergarten period. Therefore, an essential part of the nursery school's progress is to obtain as much reliable information as possible about the child's life and experiences in his home, and at the same time, to keep the parents fully informed of the child's progress and experiences in school. The teacher needs to know the home experience prior to, as well as during nursery school attendance, in order to help her estimate the child's readiness for group experiences, and the acceptance of adults other than his parents. As the parents bring and call for their children, an informal, friendly and informative talk can take place between parent and teacher, concerning the child's experiences at home.

The parents, especially the mother, need to know the child's sleeping, eating and eliminating behaviour at school, any minor scratches or bruises incurred, and their treatment. Parents need to be informed in advance of any field-trips outside the school, and their permission obtained. Sometimes they may feel that a particular trip may not be advisable for their child. For example, if the teacher is informed in advance that a child is afraid of railway trains, she will be in a better position to handle his fear.

Informal 'get-together' provides an opportunity for staff and parents to become acquainted. Most groups prefer informal meetings to a 'parent education' programme. Few like to be 'educated', but many are relieved to learn through group association that other people too have the same questions to ask and are eager to learn of their children's progress. The nursery school staff should impress upon parents that they are welcome to visit the nursery school any time, and should encourage them to do so. They should also be specially invited to the various nursery school activities in which their children participate. This continuous sharing between parents and staff members, creates an atmosphere of reality in the nursery school. It is in this atmosphere of confidence, that small and large problems can be recognized and solved together to mutual advantage.

It should be clearly understood that *the nursery school is not a substitute for the home*, but only a continuation of it and should stimulate home-conditions to the extent possible. The more closely the school works with the child and his parents, the more completely are the child's potentialities developed. Parents' participation in the nursery school programmes in our country needs to be greatly improved.

Balwadis or Nursery Schools in India

The idea of pre-school education is not a novel one in our country. 'Nursery Schools', 'Infant Schools', 'Kindergarten Schools', 'Balwadis', 'Bal Bhawans', 'Bal Mandirs' and 'Bal Ghars' have been organized and run by missionaries and voluntary social organizations for quite a few decades. However, for a long time, they were meant only for the privileged few in the upper classes, since the fee demanded in these schools was beyond the means of the average parent. The past decade has seen a major turn in the history of the pre-school movement in India. Hundreds of 'Balwadis' have been established in rural and urban areas. The Kasturba Gandhi National Memorial Trust, the Sarvodaya Kendras, the Central and State Welfare Boards, the Community Development and National Extension Services, different Seva Mandals, and similar agencies are managing these Balwadis. The Indian Council of Child Welfare has initiated an 'Integrated Child Welfare Programme' for pre-school children. The School Health Committee appointed by the Government of India in 1960, has made valuable recommendations regarding meeting the nutritional requirements of the pre-school group. UNICEF and other International agencies and CARE are devoting much of their contribution to the welfare of pre-school children.

The name 'Balwadi,' was first given to the nursery school started at Bordi near Bombay, by the Nutan Bal Shikshan Sangh. 'Wadi' in Marathi means orchard. Hence the name 'Balwadi' to the nursery school, where young saplings are provided with the optimum environment for growth and development. Smt. Tarabai Modak, a pioneer in the field, has brought out many guidebooks out of her rich experience.

Provision for Pre-school Education in the Third Five-Year Plan

The Third Five-Year Plan states: 'The need for expanding facilities for pre-school education is being increasingly stressed. In the past, progress in this direction has depended mainly on the work of voluntary organizations and the establishment of a number of Balwadis . The number of children enrolled in pre-school classes rose from 28,000 in 1950-51 to 75,000 in 1955-56, and is now estimated at about 300,000. There are, at present about 5000 Balwadis; of these about 2500 are assisted by the Central and State Social Welfare Boards. The existing Balwadis need to be improved and provided with trained child welfare workers (Balsevikas). The Third Plan provides for the setting up of six training centres for Balsevikas. In the programmefor education three crores of rupees have been allotted for child welfare and allied schemes at the centre and about one crore of rupees in the states in addition to resources available under the Community Development and Social Welfare programmes. Schemes for child welfare now being formulated by the Ministry of Education include improvement of existing Balwadis, the opening of new number of pilot projects for child welfare in which education, health ad welfare services will be organized in an integrated manner. Schemes for children, will cotinue to be an important part of the programmes undertaken for women and children in Community Development Blocks and in Welfare Extension Projects.'

The Indian Council of Child Welfare

The Indian Council of Child Welfare (ICCW) emerged as a registered body in 1952 as a result of the merger of the Indian National Committee for Children and the Save the Children Fund Committee.

The ICCW believes that child welfare work is an investment in human capital and that it will yield the richest dividends in the future for it goes to the very roots of the problem of improving the quality of our human material, which after all is the real wealth of our country. The ICCW has, therefore, been working towards the establishment of programmes of work and projects which will meet some of these needs for the normal as well as the handicapped child. Along with its many other programmes the Council is also undertaking the training of Balsevikas. With assistance from the Planning Commission and the Central Social Welfare Board, the ICCW intends setting up six regional training centres for child welfare workers. The first is being set up in Delhi. Provision is also made for the development of pre-school facilities for children of the age group three to six years.

Problems of Pre-school Education in India

This rapid growth in the number of Balwadis in India is by no means a complete solution to the problem of pre-school education. In fact, many of these schools come nowhere near the minimum standards set up for an average nursery school. The problems of pre-school education in India have been summarized by Mrs. Amitaben Varma (23) along the following lines:

1. More attention is being paid to the *number* of balwadis than their *quality*.
2. Lack of research work on both rural and urban children.
3. Need for Indianizing the project. Most principles of nursery education are based on western philosophy.
4. Lack of cooperation amongst the various institutions working for the promotion of pre-school education.
5. Need for a central organization to plan and coordinate the work of the various organizations.

6. Need for more facilities to train pre-school teachers.
7. Lack of availability of suitable literature and equipment for children. 'The market today is flooded with cheap and tawdry and shoddy publications, where the language is poor, the paper cheap, the print small, the illustrations poor and the format unattractive. Instead of giving children what they enjoy and appreciate, they are given what adults think they should read. Instead of fun and humour, these books are full of moralizing.' State Governments are doing much to encourage the publication of children's books by Indian authors. There are indeed plenty of sources from which themes can be selected, for our mythology and religious literature are full of interesting stories suitable for children of all ages.
8. Lack of professional literature for teachers.
9. Improper financial support.
10. Need for constant and frequent appraisal and evaluation of the programmes of pre-school education.

Future

In spite of these problems, the present achievements in pre-school education are heartening, and give us the hope of a more bright and successful future. As more trained personnel for pre-school education become available, and as nursery schools are better organized, significant success will be achieved in pre-school education.

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15

SOME NEW PERSPECTIVES ON LITERATURE FOR CHILDREN

Francis Shoemaker

We have dwelt on the physical maturation of the organism, its growth within the physical-biological environment from which it draws its sustainence and its shelter. We have dealt also with some aspects of social development of the child, within the familial-community environment from which he draws his social sense and his security. But we have paid little explicit attention to a third 'environment,' which provides for the quality of controlling participation in both others, and also determines the sense of personal integrity that constitutes his individuality and his basic *humanness*. This is the environment of symbols, into which the individual transforms all direct experience, and through which he handles all vicarious and accumulated experience. This is the environment of 'communication' in language—the network of information and values with which, in introspection and interior dialogue, the individual undertakes any action or arrives at any value judgment. But it is also the environment of 'communication' in all other media besides languages—painting, music, dance, and the like. As Rabindranath Tagore so wisely observed in his *Diary of A Westward Voyage*, a large part of man can never find its expression in the mere language of words. It must therefore seek its other languages—lines, colours, sounds and movement. The purpose of this concluding discussion, then, is to explore this humanizing and individualizing environment, looking first at the major contributions to human development of the symbol systems of arts and sciences—and then, within this broad context, looking specifically at *literature* in its varied forms, ranging, as the Children's Book Trust defines the term, 'from folk tales, adventure stories, comic and biography to accounts of other lands and peoples, historical facts, art, nature study and scientific discoveries.'

This sounds encyclopaedic. It could be. To provide limits and focus we will move sequentially through four sections: (1) symbols for facts and feelings, (2) literature and the organization of knowledge, (3) literature and the organization of values, (4) implications for the writing and teaching of literature for children in modern India.

Symbols for Facts and Feelings

It seems appropriate that we take our initial cue from the idea that at birth the child (even extending into youth) is solely 'potentiality.' Imagine, if you will, the moment of the child's birth cry, which is its first communication with the world, its first independent participation in its environments. It symbolizes for us the complete awakening of the whole organism. Figuratively, the birth cry throws the switch which starts the life-long electronic-chemical-mechanical process that will structure the evolving self of this new person.

Sustained observation of the early moments of the child's life tells us more. We notice that during the deft *post-partum* separation and cleaning of mucous from the child's throat, the new little organism lies rigid. Then, with exhalation of the first air to have filled its lungs, it experiences an organic paroxysm reaching through every fibre of its neuromuscular system. Vocal cords vibrate; the respiratory system establishes its rhythm; muscular tensions relax and the bladder empties; arms and legs lose their rigidity and fists open and close; eyes open for a brief unfocused exposure to light; eardrums (we must presume) vibrate to the myriad new, unsorted sounds; and then the organism settles into sleep. It has completed its first cycle of tension-expression-relaxation.

The rest of the healthy child's life will consist of a succession of comparable but increasingly complex cycles. The process of maturation will consist in the gradual development of discriminatory ability in each of the gross initial life-starting movements. The automatic vibration of vocal cords which produced the birth cry will, for the normal child, become the consciously controlled use of larynx, lips, lungs, teeth, tongue and diaphragm to produce the speech sounds, sentence patterns and literary forms of the mother tongue. More noise from vibrating eardrums will become discernible as the voice of the self or of others, and as volume, tone, rhythm, pitch, quality. The unfocused vision will develop discriminatory abilities to perceive size, shape, shade, depth and distance. Undisciplined thrust of fists and unfolding fingers will mature, gradually, to orderly grasping, drawing, writing and communicative gesture in dance. Spasmic kick of feet and limbs will take on the discipline of walking, mountain climbing, athletics, dance.

Each refinement is potential in varying degree for the healthy individual; each develops through transactional participation in the three 'environments'; each is a part, in a primary way, of the total process of 'becoming'; each contributes to the individual's control of some aspect of his environment. The *consciousness* of that control, however, is possible because the individual transforms all his experience symbolically. As philosopher-musician, Susanne Langer notes in *Philosophy in a New Key*, "Man's conquest of the world undoubtedly rests on the supreme development of his brain, which allows him to synthesize, delay, and modify his reactions by the interpolation of *symbols* in the gaps and confusions of direct experience, and by means of 'verbal signs' to add the experiences of other people to his own" (18).

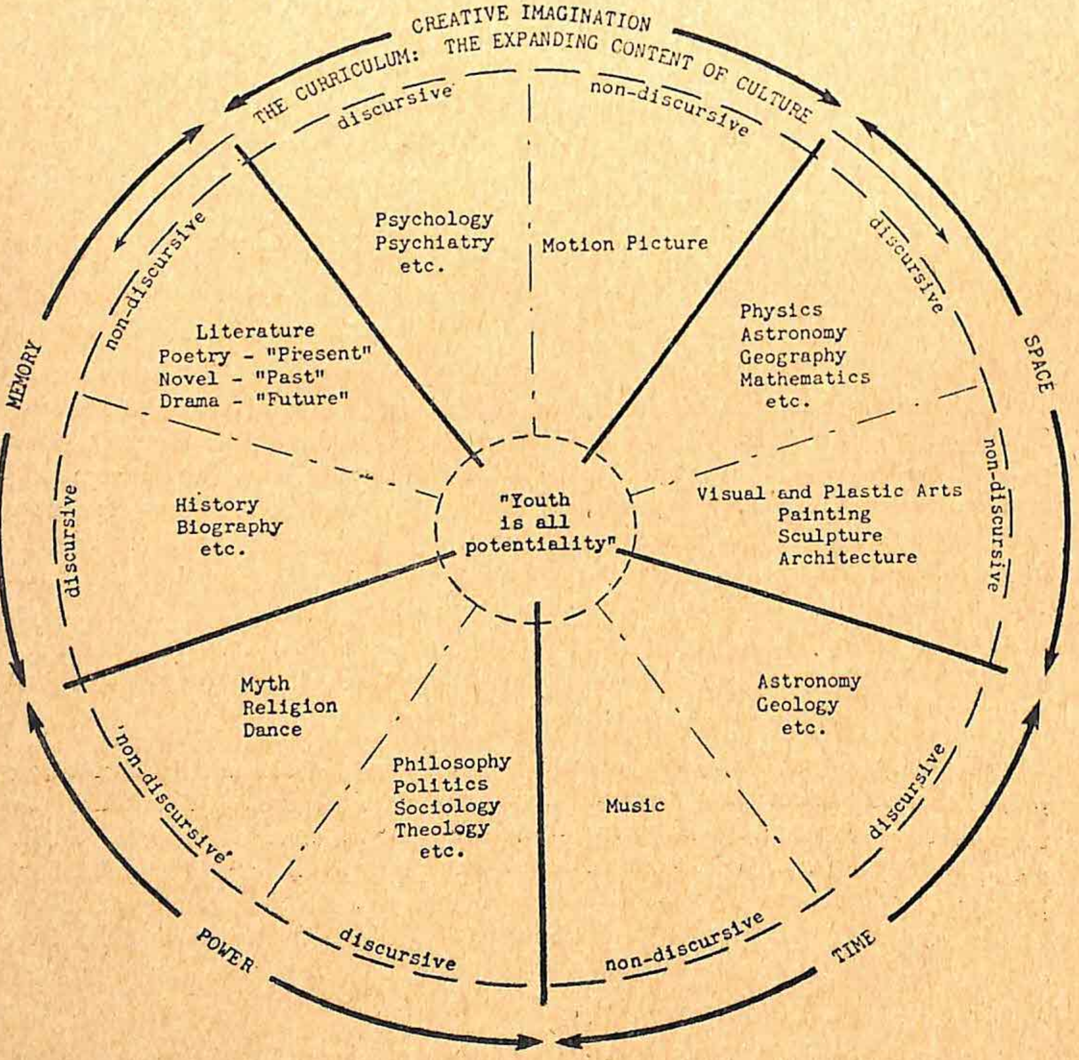
Here it is important for us to distinguish two kinds of symbols, or symbolic modes, through which the individual matures his conscious controls. These are the *discursive* and the *non-discursive* symbols through which, respectively, the individual (increasingly from childhood to maturity) is able (1) to handle the great intellectual structures of science and history, and (2) to give form and fabric to his life of feeling.

Discursive symbols provide correlation between names and things and between concepts and things. They are verifiable and duplicable; they conform to the laws of syntax or of mathematics. They may be understood serially. They contain the *facts* of life as we know them at any given time.

Non-discursive symbols, however, are neither verifiable nor duplicable. They provide correlation between names and personal perceptions at a given point in space-time. They are not serial or additive. They do not represent actual experiential events or feelings. They do represent moving experiences in religion and myth, and ideas of feelings and illusions of virtual experience in the arts—the illusion of virtual space in plastic arts; the illusion of virtual time in music; the illusion of virtual power in dance; the illusion of virtual memory in literature; the illusion of virtual dream in the motion picture. They give us access to our *feelings* about the facts we know, and to awareness of significance and value in human existence.

Broadly, discursive symbols are the media for sciences and mathematics; non-discursive symbols are the media for the arts. Discursive symbols are the tools of the *pattern-seeking scientist*; non-discursive symbols are the tools of the *pattern-making artist*, though as the English encephalographer, W. Grey Walter, notes, 'there is a much more intimate relation between the seeking and making of patterns' than this sharp dichotomy suggests (33). Together they help to satisfy the most imperious drive of the human being, the quest for *order* and *orderliness*, for *design in life*, and for a *design for living.*

It may be helpful at this juncture to represent this concept in a visualizable form, which will show briefly how intimately literature is tied up with child development—and then proceed to our concerns for literature and the organization of knowledge. In the diagrammatic 'Discursive and Non-Discursive Symbolization: Approaches in Fact and Feeling to Five Aspects of Human Experience,' let us look first to the centre of the circle, where *the child is all potentiality.* He has the potential to develop from the instinctive purposiveness of the baby, through the perceived purposiveness of the adolescent, to the conceived purposiveness of the self-conscious self. The direction of his develop-



Discursive and Non-Discursive Symbolization: Approaches in Fact and Feeling to Five Aspects of Human Experience (27).

ment is towards the complete understanding and control of all the conditions of life, represented by the outer circle—the constantly expanding limits of human knowledge and the deepening perceptions of sympathy and imagination.

The five major actors of the perimeter represent five aspects of orientation to life—orientation in SPACE, orientation in TIME, orientation to controlled expenditure of ENERGY in space-time; orientation to the accumulated experience and values of culture, MEMORY; and orientation to a disciplined projection, IMAGINATION, into the desired world of tomorrow or 'day-after-tomorrow.' The sub-divisions of the major sectors indicate the two symbolic modes through which orientations are accessible, both in fact and feeling about the fact—and the areas of study and practice, in school and out, which use these modes.

One interesting and all-important item which is not represented in the small space of this diagram is that language, which embraces the entire content of its culture, can be used discursively in the sciences as well as non-discursively in the art forms of fiction, drama and poetry. In consequence, such terms as the 'literature of science' and the 'literature of art criticism' are common coin today. And we recognize them as significant contributors to personal growth. At the risk of seeming diversion from our major concern for literature, it will be helpful to elaborate on the two symbolic modes as we observe them in other communication arts besides literature. Both the broader context and the comparison will make the primary significance of the forms of literature much clearer.

SPACE AND VIRTUAL SPACE

We measure observable space in mathematics. We learn to measure cosmic space with mathematics and physics, and to map it with geometry, geography and topography. We deal with it actually and conceptually through discursive symbols in all these fields.

But delineation of this experiential spatial environment in which we live is not the purpose of non-discursive symbols of art. The organized space of a picture is not actual space, we can't walk through it or hear our voices echo in it. It is entirely *visual space* which is created by the organizing shapes in the picture, the statue or the building. But in the feelings aroused by visual space and the observation of the artistry by which the symbol touches us intellectually and emotionally, the observer learns something about the meaning of space to the fulfilment of human living. A comparative viewing of spatial relations in a painting of an urban slum and a planned city would provide a case in point.

Time and Feeling for the Passing of Time

We measure time and report it discursively in verifiable minutes and hours and fractions or multiplications of them. And clock time, or calendar time, or geologic time is simply the measurement of change by comparing two states of an instrument, or dates in history, or data in geology. In contrast, we experience time non-discursively through music, which is a sequence of tones in time. The symbolic power of music lies in the fact that it creates a pattern of tensions and resolutions. The artistry by which these tensions mount, diminish or merge into longer and greater tensions, affords us the illusion of the passage of time. Observation of the artistic form helps to increase discriminatory abilities relating to time, timeliness and timing—all central to modern living.

Power and Expenditure of Energy in Space-time

Primitive man lived in a realm of powers, of animistic forces, which he explained to his satisfaction in myth, harmonised with his spiritual needs in religion, and propitiated and controlled through dance.

Modern man lives in a world of power—atomic power, political power, the power of the press, of public opinion, of 'interests,', hobbies, and the like. But because we know more than did primitive man about the universe, and have developed technologies for measurement, prediction and control of these forms of power, we have in large measure rebuilt the animistic world into a world of reason. We operate this world with the discursive use of mathematical, graphic and linguistic symbols. With them we control the release of energies or plot 'fields of force' in all our relations in space-time. And we do this within the organized structures of physics, politics, political science, economics, theology, anthropology, sociology and comparable sciences.

Beyond the order which adults achieve (and children observe) with this discursive, rational control, the individual needs to symbolize or give form to his feelings about the forces which impinge on his life. He needs to integrate these kinesthetically into his whole neuromuscular system, as his most basic orientation in space-time. Here the non-discursive symbolism of dance makes the world of power experienceable and visible for participant and percipient alike.

Memory, Language and the Semblance of Life

Language is the most complex invention of the human mind. It is the central nervous system of society. With it we name things and ideas, we share experience, we cooperate with one another; we remember events and store up experiences and feelings; we imagine events in the future; we plan for them; we make comparisons and develop values; we reason; we store tensions and release them at will; we become self-directive in the interests of national and world integration; we come to know our self in our most intimate, sub-vocal introspections.

This imposing list of actions differentiates us as human beings from all other animals. And the way we perform each one differentiates us from one another and constitutes our individuality.

Our verbal world, then, is our primary world of reality. Language as we have already observed in the discursive handling of concepts in sciences and history, is the medium for conceptualizing, recording and accumulating experience. In language we transmit culture, evaluate it, and work out innovations in it. And language is the medium through which we conceive of self and the functions of discursive and non-discursive symbolism in maturation of self.

The unique character of language among other symbol systems is that the linguistic forms, the words, are identical in both discursive and non-discursive use. In the sciences and history we *reconstruct* selected moments in the progression of known and verifiable events; the selections constitute the bias or point of view of the recorder.

In the great literary forms, through (the poem, novel, drama), we *create* salient moments in imagined experience, and put them together in a self-contained form, in which every detail is patterned into an organic whole. We will look at this in more detail presently; suffice now to say that both forms of language use apply equally to literature for children and literature for adults.

IMAGINATION AND CONSTRUCTIVE DESIGN

Thus far we have examined long-established fields of sciences, history and conventional art forms, paired for their discursive and non-discursive contributions to the rounding of personal development. We have looked at the facts-and-feelings of immediate events in space-time, at the remembered experience of the past. In each of these areas the use of imagination is a central value; but nowhere have we yet seen either a science devoted to the disciplined study of imagination, or an art form dependent primarily on this disciplining of imagination.

In the newer sciences of psychology and psychiatry we recognize efforts to study and report discursively the symbolism of dream. Here the mind, awake or asleep, is constantly scanning its content for meaningful pattern. And the dreamer is constantly at the centre of the scanning artistry, seeing himself as intimately involved in every event.

Comparably, in the relatively new art form of the motion picture, the viewer sees all events through the lens of the camera, with himself as participant. Nowhere else in his experience, except in dreams, is he able to range so widely without physical movement or physical participation.

In the motion picture, which physically is a series of 'still' pictures passing before the eye at 24 per second, so that they seem to constitute continuous action, it is the observer who puts them together. He actually 'creates' from the montage his own imagined experience. Awareness of the film form, which is designed to influence the 'creation' of his design, calls for emotional-intellectual identification with the producer of the film and the facts and feelings which have led to the completion of the film.

It is obvious from our circular diagram that we are dealing with a design which puts into balanced juxtaposition the major areas of human expression, the major orders of factual information and concepts, and the major orderings of feeling and value. Nothing short of this total design seems appropriate or adequate for education of children today—as we shall see first in observations on literature and the organization of knowledge.

Literature and the Organization of Knowledge

Thomas De Quincy introduced us to the concept of the 'literature of knowledge' and the 'literature of power.' But his concern was not for either form in its relation to child development. Even as recently as the writing of Jean Piaget we find explicit belief that children are not capable of critical thinking before age seven or eight, that they are engrossed in the immediacy of sizeable, tangible objects that can be enumerated and identified (21, 22).

But both De Quincy and Piaget predate the electronic revolution in communication that now, for the first time, makes instantaneously available the entire accumulated and accumulating experience of civilized man. The 'environment of symbols' provides an unending feast of exciting information, values and relationships. As the authors of *Fostering Intellectual Development in Young Children* write, 'Today's children are bombarded by information. The advancement of science and technology, the compactness of living, the ease of communication, the closeness of the entire world because of speed of travel, and other new developments cry out to children to look, test, and learn' (34).

This is true in any country where the colour press has wide distribution, where radio reaches into a large proportion of homes, and where motion pictures are easily and frequently accessible. It is particularly true of areas where TV reaches appreciable numbers. But with the rapidity of change brought about by this very flood of information, it will be true of all countries, virtually the 'day-after-tomorrow.' One staggering effect of this revolution in communication is that the school is no longer the major channel for information flow in advanced cultures. And this will be true of emerging societies very shortly. The other public channels (the school, of course, is a public channel of communication) now disseminate more information than all the classrooms. This alters radically the function of the school. In addition to imparting information (once the primary function), the major task shifts to helping children sort, organize, evaluate the otherwise chaotic mass of information available in the society.

And we know that young children are ready to go along with this next step in their development. *Fostering Intellectual Development in Young Children* shows that children have ways of understanding their world (34). They are avid collectors of information. Having information and being able to use it in appropriate ways is a source of great satisfaction to children. They use their information in dramatic play, in an active search for relationships, in attempts 'to see likenesses and differences, to set up classes of things, and to rule out those things which to them do not make sense.' Further, even at ages 3-5 they begin to generalize and attempt to reach logical conclusions.

More specifically young children want to know about the physical environment that surrounds them (34). They attempt to distinguish between fantasy and reality; they are concerned with the phenomena of weather, plants and animals, electricity as a source of light and power, aircraft, procreation, and death. They are similarly concerned with the demands of the social environment (34), the giving and receiving of affection, winning friends, observing social conventions, recognizing male-female roles of boys and girls and adults. Further, and still more dramatically, children are concerned with the environment of symbols (34)—with their language, with precision of expression, the creative use of language, with exploring the potentialities of language for humour and pleasure, and with an intelligent approach to learning to read.

We must recognize, of course, that these descriptions of readiness for intellectual inquiry are of youngsters in contemporary United States. For viable descriptions of youngsters elsewhere, comparable child studies must be made. But this we know, that with the spread of modern communication facilities, differences between children's curiosities and information will be minimized. And with fair degree of reliability it would be appropriate for teachers to begin to help children sort information and form concepts basic to the structure of the fields in which man has organized his experience.

Now—what literature is available for children to use, which undertakes to present factual information and concepts of space-time, energy and culture symbols of the past and future in their broadest context?—and which uses not only good writing but advanced forms of print-and-picture to communicate them? A total listing would mean hundreds of items, of course. And a detailed classification to conform to our five orientations would be too confining for good teachers. What we may do most helpfully, is examine a few books now readily available as reference material for school libraries and classes—and potentially available to all students under a dynamic policy of *investment in the maturation of children*—noting major orientations and concepts children would find helpful.

In orientation to space-time, key concepts central to the teaching areas of science include such phrasings as: The universe is very large; the earth is old; the universe is constantly changing; there are great variations in the universe (7). These all enter, through judicious correlation of print-and-picture in the six volumes of *The Golden Book Picture Atlas of the World* (1). For teacher and student inquiring together into information new to both of them, these atlases get at the size of the universe, and relative sizes of continents. They set up points of comparison in time, to challenge the imagination to look from *now* and what *is*, to *tomorrow* and what *could be*. And with equal clarity they tease out the concept of unity-in-diversity in picturing and discussing such aspects of geography as urban-rural relationships, regional variations in temperature and climate, and their consequences for human culture.

Comparable approaches to other key concepts of space-time are central to the organization and picture-print presentation in other of the Golden Press books, and similarly conceived Rathbone Books. *The Story of Geology: Our Changing Earth Through the Ages* (36), is a clear example. Young readers are drawn into observation of rivers, winds and waters as forces which changed the world to its present form. Fitting student attitudes for generalized application to all phases of life, even the seemingly permanent world is not 'finished' ; even continents float and polar points change. But man is central to all these vast changes, since he alone has consciousness of them now—and with the newer methods of uranium and carbon 'dating' can begin to reconstruct a time scale and 'read the rocks' for the history of the universe. In Huxley's *The Story of Evolution* (14) there is an additional concept of the 'directives' for growth carried in the gene structure—suggesting a direction to the course of evolution. And of special interest in this year of Oceanography, with fifty nations cooperating in the study of the Indian Ocean, *The Sea Around Us* (6) and *Adventure* *of the Sea* (9) open up new vistas untouched in any current textbook or visual aid in India.

In addition to intimate acquaintance with the physical world, modern 'literature of knowledge' for children introduces them to the pageant of life of ancient times in one of a series of Rathbone Books edited by William Elgin Swinton, *The Story of Prehistoric Animals* (30). In addition to concepts of mapping and distribution of life forms, these books turn the young readers' attention to named men whose energy and method contributed new knowledge. In the child overawed with the accumulated mass of information today, knowledge that each stage of advance was planned and achieved by an individual is invaluable.

The number and recency of these spectacular books suggest the urgency which responsible publishers, scientists and educators feel for the dissemination of authoritative information within relating concepts. The three-volume *Macdonald Illustrated Library* constitutes another instance (5, 10, 19). In Vol. 1, *Science* and Vol. 2, *Nature,* embracing ambitious dimensions of whole fields of knowledge in single volumes, conscious attention is paid to the special relation of print to picture, so that tremendous condensation is effected around concepts without loss of significant detail. In Vol. 3, *Geography*, the younger reader is brought to consciousness of the methods of research and inquiry *in* the field and related methods of study *of* the field—perhaps the most sophisticated aspect of professional education today. For even younger readers *How and Why Wonder Books* is still another instance (3).

Concepts of physical power become readily understandable in *Men, Missiles and Machines*: *The Wonderful World of Power* (12). Here Hogben's interest in language as well as scientific humanism merges with the youngster's interest in word-play, and children read under alliterative titles such as Making the Most of Muscles; Getting the Grips with Gravity, Harnessing Heat, Secret Strength of the Storm, Alliance with Atoms, Power in Plenty. Comparable concepts of power working for change in the social world become intelligible in *The Sciences of Mankind* (35) and also in *Puzzle of the Past.* (15) And again, consciousness of man's power to control his own social environment through scientific study is a major concept. Workers and methods of working are made known in the fields of anthropology, archaeology, demography, economics, geography, history, political science, psychology, sociology, social work, statistics. It seems ready-made for India's children. 'When social change is rapid, where routines are broken, where tradition fails, the need is most for the sciences of mankind. The real challenge of the Space Age lies in deepening our knowledge of human relations and of the individual.' (8, 32, 35).

Children's interest in expressive arts, not only as performers but as intelligent listeners and observers is catered to in numbers of excellent books, all bespeaking the current world concern for communication arts. When values are at stake, as they are on every front today, people turn their attention to the languages in which the values are expressed. And children share in this concern.

Launcelot Hogben's *The Signs of Civilization* (13) does for children what his earlier book *From Cave Painting to Comic Strip* did for scholars of communication ten years ago. This is a magnificent historical treatment of the revolutions in communication that have brought about major changes in society, plus the answer to the curious child's interest in the physics of television and electronic computers and a challenge to every person's imagination in the potentialities for world harmony in electronic translating machines. These are the facts of life for the children of the world, for whom, indeed, routines are broken and tradition fails.

Children's interest in gaining greater discriminatory abilities in other areas of communication arts is met in additional Rathbone Books. J.B. Priestly's *The Story of Theatre* (24) helps children try on the roles of other selves in drama. Benjamin Britten's *The Story of Music* (4) opens up new vistas of relationships between composer, performer and listener—again a sophisticated approach beating away at the time lag in appreciation of music as a key art in human culture.

Literature and the Organization of Values

To repeat, the child develops his human potentialities through many kinds of symbols. Thus far we have looked in detail at only the intellectual potentialities fed and fostered through the discursive (factual) use of knowledge. We turn now to the emotional potentialities that are deepened and diversified through non-discursive (individually perceived and felt) use of language in the literature of poetry, drama, fiction. Discursive language, as we have noted, stimulates and satisfies the curiosity and gives the child control over vast areas of factual information essential for a full life today. But however stimulating and exciting this may be, it does not necessarily affect the child's basic life values: the range of his ability to identify in full *sympathy* with others, the creativeness of his *imagination*, the integrity of his *will*—all of which combine to determine how and in what direction he will spend his energies in the time of his life. True, the base for development of these individualizing values is laid in the family. But the limitations for extended development in many families are obvious. And the pre-occupation of the primary and secondary school curricula with sheer accumulated fact leaves multitudes of boys and girls emotionally starved.

This evaluation is challengeable, of course. It will be helpful, therefore, to take a new social-psychological view of the nature of literature, its sources in the culture, its demands on the reader, its effects on persons and their society, so that teachers may estimate more closely the role of literature in filling the void. Let us turn, then, to a description of successive steps in the process of creation of a piece of literature.

The process begins with the life of the writer in his culture. He is a person much like everyone else, except that he observes people and events more closely than most of us. But he observes out of a wide sympathy for the full potentialities of persons. Frequently he notes discrepancies between what *is* and what in imagination he thinks *might be* if all possible resources were focused on perfecting a situation.

Many other people may also note the discrepancy; some try to correct it in direct action in politics, or education, or social welfare work. The great majority do nothing, for their *selfconcept* does not include the fulfilment of other selves, and their *imaginative perceptions* of ultimate consequences of a situation are not strong enough to impel them to do anything about it. They may be momentarily distressed by what they observe, but they do not *will* themselves to alleviate the condition. Unlike the direct-action people and the no-action people, the writer engages in what we might term indirect action. With a non-discursive organization of symbols he clarifies the values at stake and poses alternate values in such a way that other people see with his eyes and feel with his passion and are themselves moved by an equal will to corrective action or support for the corrective action of others. How does he do this ?

When the writer is disturbed by his observation of unrealized possibilities, his mind scans the situation again and again, becoming aware presently of a mood or feeling tone or atmosphere that surrounds the situation. This is his 'primary symbol.' Now with increasing consciousness his mind plays over this feeling tone, until there rises to full consciousness a 'secondary symbol'—a visible person or place or idea imbued with the feeling tone he is experiencing. The writer now elaborates his symbolic image; i.e., he creates situations conversations, introspections, decisions and the like, in which the discrepant values are depicted, developed and dealt with to the satisfaction of the author. The story he creates is not autobiography, but an analogue of his emotional-intellectual struggle to harmonize some phase of the chaos of the world around him.

This is a difficult job—perhaps the most difficult any human being faces—for with every word and phrase he selects and sets down, he is re-constructing not only some aspect of his world, but a comparable aspect of his self. At any point the part of least resistance is to stop writing and renounce his will to create a better design for living. The internal conflict is severe. It involves emotional tension, physical and spiritual suffering, and hard intellectual effort. Like the birth cry, it involves the entire organism. And like the first communication which announces the physical birth of the organism, the completion of this far more complex communication constitutes the spiritual re-birth of the self. Not to complete it would be ruinous; the greater the effort sustained to complete it, the more profoundly the self is consolidated and lifted up.

The work of literature is not really 'finished' when the last period is put down. It goes on 'working'; it goes on being finished time and again and always differently, as each reader brings his background and experience into play with the world the author designed. He participates vicariously in the situations through which the symbolic figures deal with ideas and values. He too could stop at this early stage of appreciation and let the story be merely a leisure-time activity. On the other hand, he may press on to try to *recreate the creative experience* of the author, to determine the meaning of the symbolic actions. If he does this, then he too lifts himself to a sense of control and independence comparable to the author's.

There are clear implications for human liberty in this process. In each phase, the writing and the re-creative reading, as the symbolized order assumes increasingly clear form under the drive of the human will, both artist and reader feel an increasing sense of freedom for self-direction (26).

It may seem, at first blush, that this is a more philosophic approach to literature than is required for children's literature. Not at all! The author undertakes his writing on behalf of children whose growth and development he sees as the primary value in life. Knowing their struggles to express their love, to win and merit friendship of persons, to understand their world and to the best of their ability, themselves, he chooses situations and characters in which the child can see himself and through which he can 'find' himself. Look at *Idgah* (23) by Prem Chand. Here the callousness and thoughtlessness of children who have much are weighed against their potential tenderness as symbolized in five-year-old Hamid. This is a matter of much concern to Prem Chand and yet one of extreme delicacy since it involves children in their formative years. So he selects the serious-jubilant occasion of Id to have little Hamid go to the Idgah. The boy is tormented and teased by fickle friends when he buys a pair of iron tongs instead of sweets and rides on the great wheel. Prem Chand sustains the reader's curiosity, stretching his sympathies to identify first with the 'normal' boys, then with Hamid as he struggles with his several loyalties to retain his purchase. Only on the last page does the author have

Hamid give the tongs to his old Granny, Amina, to protect her fingers at the cooking fire. This was mute lore, solid, filled to the core with sweetness. How wise, gentle and self-sacrificing the child was. How sorely he must have been tormented, while the others bought sweets and toys ! How could he suffer so much? He remembered his old Granny even at the fair. Amina was supremely happy.

'And now something very queer happened. It was stranger than these tongs of Hamid. The child Hamid had appeared in the role of an elderly Hamid. The old Amina now appeared as the child Amina. She started crying. She spread out her scarf and showered blessings on Hamid. Big tears rolled down her eyes all the time. How could Hamid grasp this mystery?'

Taken separately, the words are discursive accounts of the village, the people, the Idgah. But in the completed design, in which every detail is a consciously integrated part of the whole, the significant values and meaning become apparent only with the last word. The whole is, therefore, non-discursive, and a work of art. In the last paragraphs, the reader is emotionally-intellectually led to assume first the role of Granny, then of Hamid, then of himself as evaluator, until he has tried on the roles of these central characters. Then in the last sentence he must return to his own now enlarged role to see things in the wide perspective of Prem Chand.

The creative process is not new, though our awareness of it is. The *Mahabharata* and the *Ramayana* must originally have been recited from a comparable urge of a tribal poet to rehearse and idealize threatened traditional values in the face of invasion and social change. The characters continue to enlist our emotional-intellectual identification. And children thrill to the exploits of Arjuna or Bhima or Rama. And they try on the roles of heroes and villains alike, to see how they like the role or the consequences of the role. The essential differences between the classical story and the contemporary lies in the reality of the symbol. At one time the characters of the *Mahabharata* and *Ramayana* were as 'real' for India's children as Hamid can be for the children of today. This is not now true. While the loyalty of the Pandavas to Yudhishtira was exemplary, no modern child could fathom such loyalty to a gambler who puts up his polyandrous wife and brothers as stakes. And while Rama's heroism in winning Sita back to his home is a model of courage, a thoughtful modern child would be confused by her subjection to the ordeal by fire to attest to her love and integrity. In other words, approaching these great books as statements of individual-social values also involves the concept of historical symbols of culture—which is not conventionally part of a child's outlook.

The Greek *Odyssey*, of comparable age, also could yield larger dividends as a culture symbol. But it can also stand by itself for young readers. The main character is the son of Odysseus, Telemachus, for whom the story is told so that he may imbibe the values of his people and grow to maturity to succeed his father. It was once in large measure 'children's literature', and continues admirably in this role today. All this is not to detract from the value of the classical literature. It is merely to suggest that for today's children it does not provide fully for their literary experience. They need also to have explicit models of alternate forms of belief and behaviour appropriate for today's world.

The amount of available literature which provides such models is growing in India, though its wide distribution or serious use in schools is yet to be achieved. The Children's Book Trust is starting to provide a varied fare of value-laden folk tales and animal stories. Their first publication, *The King's Choice* (1961) provides an illustrated narrative for young children which plays on themes of loyalty, honesty, and kindness—all brought to a rememberable conclusion with 'To be a king is good. To be kind is better.' In the same vein, a dramatization of *The Crow's Eggs and the Queen's Necklace* (to be published) designs a world in which speaking animals find out that the brain is a special resource, more powerful than physical force.

Of an entirely different order are two more stories stated for publication by the Book Trust. Their added dimension is the presence of a small boy as narrator, relating in awe and admiration, the wisdom in one instance of a buffalo cow, in the other of his grandfather. *Bommakka* (16) opens with an artistic imitation to full participation. 'All this happened years ago, but it did happen. I knew Bommakka quite well, and can tell you that this is a true story. Bommakka was a buffalo cow.' Then follows an eye-opening account of the loyalty, sagacity and prowess of the 'stupid' buffalo, as it meets bears, leopards, tigers, wild pigs, languars and the like.

The second story, proposed for publication, moves even closer to reality in *Life with Grandfather*. The narrator opens with 'Everyone called me Raja.' And from this intimacy we look out on Grandfather's traditionalism, on Grandfather's all-embracing considerateness of animals, on Grandfather's belief in hard work and its rewards, and on Grandfather's sanity in laughing down the absurdities of a small-souled teacher. Here is an admirably tender invitation to two generations to understand each other.

Another kind of book feeds and informs children's interest in caring for animals. James Temple's *Leopard of the Hills* (31)is a nearly discursive effort to arouse interest in wild life preservation, which it does through inviting vicarious identification with a leopard. More 'literary' and perhaps more revealing of Indian values is *Gift of the Forest*, by R. Lal Singh and Elaine Lounsbery (28). In this story a small boy, Bim, is given a tiger cub. The story is the step by step growth of Bim in his ability to care for the cub, to love it, and then, realizing that its true nature and its best home is in the forest, to realease it to the jungle, promising, in an enigmatic final word, to join it 'tomorrow or tomorrow.'

Jeffrey Potter's *Elephant Bridge* (25) embraces these same values of knowledge of and tenderness for animals. But it adds a note of drama and immediacy through its setting in a Burmese village during World War II. And it broadens the range of experiences by having the child, Maung-Po, adopted by an elephant herd.

Girls are not entirely forgotten in the children's literature of modern India. In *Sujata and the Wild Elephant*, planned for publication by the Children's Book Trust, Sujata, aged 12, befriends an elephant in the jungle. There is a nice juxtaposition of the forms of loyalty of the little girl and the elephant, and a comparable juxtaposition of the single-track life of the animal and the multiple-track life of many interests of the human being. Such values as these, are 'musts' for the growing child, but they are accessible only in the dramatized values and decisions and actions of symbolic characters.

In the stories mentioned thus far (*Idgah* excepted), there is a dominant episodic quality, which, despite its interest, does not provide a model of the process of growing up through the making of decisions. In this category it is encouraging to find several good books, though several hundred, when they are finally written, will scarcely touch the great need. *A Cap for Mul Chand*(2) lets youngsters live through the struggles of decency surrounded by malicious adolescents.

The Road to Agra (29) broadens to include comparisons of modern personal values with traditional social values. Lalu, age 13, resolves to take his seven-year old sister to Agra for an eye operation. His mother says, 'As pilgrims walk half-way across India to get to the Holy River Ganges, I see no reason why you should not go to Agra to get Maya's eyes cured.' (p. 24). The gradual maturation of Lalu is made explicit in an aunt's comment: 'He who has patience may easily lose it on a long journey. But he who has none, like Lalu, can perhaps acquire it. A journey such as this may make a man of Lalu.' (p. 26).

A similar picture of growing up comes in *My Village in India* (11), which opens with 'My name is Dhan. .... I want to tell you about myself.' It closes with the hopeful anticipations of growing more. 'Our palm trees swing slowly back and forth in the evening wind. They are so tall. Soon I will be old enough to climb up and collect coconuts.' This is highly reminiscent of the Newberry Medal novel of 1953, ... *And Now Miguel* (17).

Probably the most significant of children's literature of India is the classic *Gay-Neck: The Story of a Pigeon,* (20) which won the Newberry Medal in 1927. Here a small boy breeds carrier pigeons, of which Gay-Neck is a paramount specimen. As the young reader goes through the process of training Gay-Neck, taking him to various parts of India, he learns, through the eyes of another child, masses of interesting geographic and biological facts. But he also is caught up in a spiritual atmosphere which mounts to the end, when he finds his narrator saying, 'Whatever we think and feel will colour what we say and do. He who fears, even unconsciously, or has his least little dream tainted with hate, will inevitably, sooner or later, translate these qualities into his action. Therefore, my brothers, live courage, breath courage and give courage. Think and feel love so that you will be able to pour out of yourselves peace and serenity as naturally as a flower gives forth fragrance. Peace be to all!' (p. 197).

Implications for Writing and Teaching Children's Literature

As we come to the end of this discussion, there seem to be three imperatives for us to heed. One is that today's children are living in a potentially big world (small world in terms of time and space), big experimentally, filled with masses of facts, ideas, values never before available to children.

They need comparably big books, copiously illustrated, to provide in print-and-picture the visual aids essential to learning and concept formation. While they need the authoritative writing of world leaders such as Huxley and Hogben, they also need big, illustrated authoritative treatments of their own states in India. *The Farmers of India* series (Indian Council of Agricultural Research) at the adult level, and the *CARE Children's Books* make a stab at providing this approach to unity in diversity, but there is need for more adequate treatment of the mosaic of India. The nation can ill afford to tie its instructional programme to the income of parents who can't afford good books for their children.

Similarly for imaginative literature, more authors should be encouraged to write for children—not retellings of ancient tales, but realistic stories of boys and girls meeting their own problems and growing up through making their own decisions in life-like situations today. A generation of such authors may be developing, for the quality of writing, and the alertness to human values in stories submitted for the annual editions of *Shanker's Children's Art Number* portend excellent literature for 'tomorrow.' At the same time, a new generation of motion picture writers and directors in the Children's Film Society will provide a new form of literary experience through film, which may reach millions of children even before the new books are made.

But if we alter the quality and approach of both factual and fictional books, won't teachers also have to alter their image of themselves as teachers? Undoubtedly so. For no teacher can know enough today to be the encyclopaedic authority on all the subjects children are interested in. But the teacher can be a guide to how to satisfy the interests, how to organize information, how to extend its significance. In short, instead of being the person who also questions and says 'Right, sit down,' he becomes the person who teaches *how to use all kinds of books to go on learning*, which today's children will have to do for the rest of their lives.

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16

TEACHER PREPARATION FOR PRE-SCHOOLS

Tarabai Modak

The idea of preparation for a task is a modern development. The theory and practice, the technique and tools are becoming more and more intricate; so much so, that mastering them before the actual execution, has become imperative. Hence, several institutions sprang into existence to prepare people for various tasks. A number of experts came forward to do the work and pre-training came to be considered absolutely necessary.

Still, there are several tasks that are undertaken straight away and the need for training is not grasped. Thousands of children are being born every hour, and are reared by parents who have no special qualification to bring them up, or to bring them into the world at all.

So also, there are teachers coming forward to conduct pre-schools absolutely without previous groundwork. Very often they have not the faintest idea of a pre-school or of the role of a teacher there.

For parents, there are one or two natural factors that goad and guide them, very often correctly, such as inborn love and intuition, and the parental urge for the wellbeing of off-spring. These instincts enable them to watch over their off-spring and protect them from dangers that may harm them. No strain or sacrifice is too great for them in this undertaking. Keeping a constant watch over their children is only the fulfilment of a pleasure-giving urge.

Not so with a teacher. There may be a little parental instinct present, and a little interest in children's wellbeing. There may be a little joy in watching children's pranks and sharing their fun. Still, all these together do not take them far. There comes a time when the teacher feels bored, and when the task becomes just a mundane routine to be gone through daily. Boredom in the teacher tells upon the children, who react by feeling dull and unenthusiastic. Thus the whole affair soon becomes a lifeless and tiresome job both for the teacher and for the children.

The idea is just gathering momentum that even parents must have special education in mother-craft or parent-craft. For teachers who do not have as a rule the natural advantages of parents, it is an absolute 'must' to prepare themselves efficiently for the valuable task they are undertaking.

Of all the schools, colleges, institutes, and academies where children, big and small, receive education, pre-schools are the most important; for it is here that the foundations of right growth are laid. The structure of the man as a whole—his emotional and intellectual development, his social adjustments and behaviour patterns, in fact, his whole character and personality depend on the influences playing upon him at this tender age.

This point must be greatly stressed and brought to the notice of parents and the general public, because it is usually held by both, as well as by the teachers themselves, that pre-schools can be conducted by anyone who has the desire and time to do so. People think that what is aimed at is only play, and that there is no education as such which includes completion of a curriculum, conducting of examinations and promotion. So it is considered enough if toys are provided, and children are allowed to play to their hearts' content. The teacher must step in only if there are quarrels and fights, and she has only to use her common sense and behave as other adults are seen to behave at home and outside. The belief prevails that children need sometimes to be scolded, sometimes to be punished, even corporally in extreme cases, and sometimes to be won over by sweet words and even sweets or promises. Sometimes, they have to be called names and condemned and shown up. Their vanity needs sometimes to be pricked by praising other children as good, and asking the naughty ones to be like them. These and several worse ways of dealing with children are traditional, time-honoured and generally accepted as proper. Hence, there is no objection raised by anyone to the running of preschools by untrained persons. Untrained teachers are even preferred by voluntary agencies with scanty funds, for they do not demand high scales of salary or allowances. If Balwadis are recognized by Government Education Departments, they have to abide by certain rules, as to teachers, equipment, building, etc., all of which imply expenditure. The grant received covers at the most 25 per cent of the admissible items. Several items like snacks, bath, oil, soap, small excursions, etc., have to be cut out, although they are very important and even necessary. How are the remaining 75 per cent and amounts spent on in admissible expenditure to be covered?

This is the main problem before private agencies. They have either to charge heavy fees or collect donations. The latter is becoming next to impossible day by day; while pre-schools charging heavy fees can cater only for the rich. Even such institutions find it difficult to make both ends meet, as they have to raise the general standard of maintenance, including teachers' salaries. Hence, lowering maintenance expenditure is the only remedy open to them. Naturally, the whole standard of work is lowered. Very often it is so low that these pre-schools, instead of helping the healthy growth of children, prove to be positively harmful. Collecting about 25 to 30 or even more children in small rooms, engaging very young girls as teachers and lack of proper equipment are the main features of these pre-schools.

First, it is not considered absolutely necessary for teachers in Balwadis to have any preparatory qualification. Secondly, even if it is considered necessary, the lack of funds stands in the way of training. Consequently, the bulk of pre-schools that we come across, are extremely unsatisfactory and often positively harmful. Under the conditions available, the only activity that can be easily conducted is to make children sit in a row with slates and pencils and ask them to learn the alphabet and numbers. This process is favoured by the management, for parents are pleased with pre-schools that teach the three R's, and even more pleased if a little English is introduced. When the government or municipalities are not prepared to take up the financial responsibility of the pre-schools, parents are the only pay-masters and managers of schools, since they pay fees or donations. As that class has to be kept pleased, it is not surprising that pre-schools degenerate into old preparatory or infant classes to a certain extent, and are used as safe places where children can be kept for three to four hours during the day when mothers can have rest, or, are free to attend classes or even to take up work. The mother's need of rest is perfectly legitimate.

Preparation for teachers includes, (1) study of the child mind and its healthy growth, both physical and mental, (2) preparation in the technique of conducting pre-schools and the suitable handling of children of the pre-school age, and (3) adapting oneself to the needs of a pre-school. Very often, we come across highly educated and learned students of psychology, with a special emphasis on the child mind, who are found to be absolutely unfit temperamentally to run a pre-school, while there are several others who have a knack for dealing with children and a sort of intuitional understanding of the child mind ; but these latter are often lacking in the technique and the theoretical knowledge of the subject. Therefore, all three sides form part of the general training of a pre-school teacher. Study and practice can come with effort, but the right temperament and interest must be inherent in the person.

There has been a vast advance in the understanding of the child mind. Once upon a time, the child was considered to be a clean slate on which teachers and preceptors could write all the benevolent things they want to instil in children. This idea has now been given up. The child grows from within and it is not possible for adults to mould it as they like. They can of course help by creating the right environment, where the inborn healthy tendencies are given full scope to develop, and children find proper opportunities to follow their urges.

It was also believed that the human mind is inclined to be tempted by lower urges and has a tendency to go from bad to worse. It has, therefore, to be kept under control by threats of severe punishment and mortification of the flesh, so that it may turn virtuous, and take to higher things that are good for the soul. Hence, even in the volumes on education and child rearing, punishment and fear of punishment are stressed. As a counterpart to threat and punishment, there was the promise of happiness and good things that are covetted in the present life and the life hereafter. Thus with the threat of punishment and the lure of rewards here or hereafter, man was kept on the right path and made to live a virtuous life. All these ideas are now abandoned. It is now believed that man has an inherent desire to progress and be good, and that he has a natural dislike for vice, unless he has an unhealthy mind. The famous saying 'There is no bad boy in the world' reflects the present day view of child psychology.

The teacher must acquire this new outlook, for which she must unlearn the many pre-conceived notions learnt from childhood, re-shape several of her fixed ideas and get rid of a number of deep-rooted prejudices. Above everything, she must learn to look at the child in a new way.

As soon as a person becomes a teacher, she thinks her sole duty is to mould the child into a perfect being by freeing him from all things considered bad and silly, and compelling him to be good and wise. She believes, according to tradition, that the child must first be taught obedience, that he must obey his parents, his elders and the teacher. He is taught to bow before them. If he refuses to obey, plays truant, becomes naughty, and unruly, he is first labelled a 'bad boy', and then punished. Usually a spirited child resents being thus punished and insulted for faults that he is not aware of. He does not understand what he is repeatedly asked to do. He naturally considers his teacher cruel and devoid of love. This is the stage at which the tragedy begins. The child puts up a brave fight against very heavy odds. The whole of the adult world, consisting of all the beloved people, father, mother, uncle, aunt, elder brother and sister, are on the side of the unloving, and unloved teacher. He cannot imagine why his family, who loved him for so long, has now turned against him. The whole position seen from the child's point of view, appears to be heart-rending, and grossly unjust to the fighter, fighting so bravely. The teacher and the adult world around the child, for their part, are engaged in the very sacred act of turning the bad child into a good citizen.

This is the most tragic side of the whole picture—there is no real villain to this piece. The child's heroic resistance is misunderstood by adults; and their apparently unkind and cruel attitude is beyond his understanding. He is baffled and tries to outwit the enemy in several ingenious ways. Thus the case gets worse and the rectifying measures stronger and punishments more severe. This happens almost every day in most homes.

Parents have to grasp several new ideas; so also the teacher. Perhaps it is even more necessary for the teacher to get the correct idea of her duties, which are to be a friend, helper, and guide and not a preceptor or mentor. This is the most vital and difficult part of the teacher's preparation for pre-school.

The teacher must have a knowledge of psychology, the child's mental processes. She must be able to understand his reactions to several things happening to him and around him, his intellectual development, which is reflected in his activities, usually considered as meaningless doings or charitably interpreted as mere play. She must understand the inner urges that the child shows in touching, lifting, throwing or carrying things. She must learn to observe closely the social life that he lives with other children, his neighbours and people at home. She must be able to show him the right behaviour-patterns at the right time and illustrate in practice the simple rules on which right social life has to be lived. Children must learn to respect one another's rights and to recognize how it is wrong to monopolize articles or attention. She should show them how to form queues, and how to await one's turn patiently, etc. The most subtle and difficult task that she has to achieve in a pre-school, at the earliest possible opportunity, is to establish a well-organized and just society of children, so that every child gets full scope to develop himself individually, and develops friendly co-operation and sympathetic relations with his companions. When Dr. Montessori stressed the value of individual work for the child, she was sharply criticised by renowned educationists. They argued that the child would lose its social contacts and become more individualistic and self-centred, and hence a misfit in society in adult life. In raising this objection, they did not take into account the other essential features of the Montessori system, the most important being the freedom of the child. The child is allowed to follow its inner urges and has full scope to mix and play freely with other children, make friends with them, and share their joys and sorrows. This is a very strong urge that the child experiences, and he is allowed to satisfy it as long, and in as many ways as he likes. The pre-school is a place where the child gets the fullest opportunity to develop individually by following his own likes and interests, and at the same time, develop into a well-adjusted social being.

There are certain other ideas about which the teacher must be clear in her mind. Among the ideas about which there is much misconception, the most significant is that of play. This word is used in several ways by adults in relation to the child. A pre-school is often described by laymen as a play-school, contrasting it with other schools where serious work and studies are supposed to be done. Several parents think the 'Play School' useless as, according to them, the child can play at home too. Why need they spend on him when he is not learning anything? That is their query.

There is another current idea that needs correction. It is that in pre-schools, children are taught *through* play. Children appear to be playing but concealed beneath the play is some useful knowledge, like medicine in sugar-coated pills. The idea underlying this is that 'play' is something of no importance but is used in teaching, because children like it very much. As a matter of fact, the child is neither playing nor working. Play as against work is a conception of adults. Things that seem to be useful to the adult are work or study; what is meaningless from their point of view is play.

The child is very serious and applies himself with great concentration to what he is doing. It may be just jumping or carrying one thing from one place to another, imitating certain actions of his elders, or repeating words again and again. In all these apparently meaningless actions the child is achieving something—mastering some action or articulation. He is not merely playing but learning.

There is another word much associated with childhood education. We hear it said: 'Do whatever you like; but let the child be happy and joyous. Let it not be sulky, and sorrowful'. The teacher must understand what makes the child happy and joyful and what makes him sulky. When the child feels satisfied by following his inner dictates to do or get something, he feels happy and if he is not able to follow them, he feels frustrated and consequently unhappy. Happiness and joy in a child are indications of healthy growth and a satisfied mind; while sulkiness and sorrowfulness are indications of his frustrations and humiliations.

Imaginative play is another thing, that is made much of in the context of pre-school activities. It is true that children often indulge in imaginative play and enjoy themselves in these make-believe games. But it must be borne in mind that they do so because they do not get the chance to do real things. There is no real satisfaction in just performing some actions, and imagining victory or joy or grandeur woven round them.

The doll has gained a special place even in pre-schools as an imaginative play to be utilized for education. Several activities such as arranging a doll's house, a doll's birthday party, washing day for doll's clothes and so on have crept into pre-schools. If we shake off the age-old belief in the place of dolls in children's play, and analyse what the child gains, we shall realise that it is not such a wonderful innovation that it must find a place in pre-schools and primary schools. In playing with a doll, the child is first imitating his mother. Children, especially girls, see their mothers tending their babies; and they like to do all the things that their mothers do. They even kiss, pat, scold and punish their dolls, as they see their mothers do. Can they have the real experience of the emotions, and the satisfaction derived from it through mere make-believe actions? The feeling would be much more real and natural if they were encouraged to have real living pets or allowed to share the responsibility of looking after a real baby in the house. Even a small plant in a pot gives the child a sense of responsibility, because if it is not regularly watered, it dies resulting in shock and grief to the child. On the other hand, its mute response to his tender care fills his life with joy. Its bringing forth new leaves, buds, flowers and fruits are the greatest rewards he gets from this non-speaking and non-smiling pet of his.

So also, the child will have real satisfaction if she is allowed to help in washing and folding baby's clothes, help her mother in doing real work in the kitchen or sweeping and dusting in the sitting-room. If she is allowed to have real parties for his friends, parties in which she actually prepares some simple eatables and serve them to her friends, her delight knows no bounds. If she can also help in washing up, she will have the satisfaction of doing real things. There is a great difference between really doing a thing and just imagining its performance. In the former, the child has to use her hands and fingers, manipulate and arrange things that require real mental and physical activity, concentration, control of movements and skills of fingers. All these help her intellectual development and her emotions find a real outlet and response.

There is a misconception in the minds of teachers that imaginative play should be encouraged because that helps the development of the child's imagination. It is quite wrong to believe this. Experience is the real basis of imagination. The images of different experiences imprinted on the memory, can be used to form new images as yet unborn. One can imagine a new animal with a horse's body, a lion's head and bull's horns. But he must have impressions of a factual horse, lion and the bull. Even the most imaginative poet or a writer of fairy tales or writer with scientific fancy like Jules Verne, cannot reach beyond the real images of his own experience. Thus it is clear that a wide range of experience is what really helps the imagination, and so children's field of experience with the help of models and pictures must be freely expanded.

Children are often seen playing imaginative games in which, through a repetition of images, they fix the ideas gained through experience. That need not be discouraged. But to encourage children to live in an unreal world and make them imagine fanciful things happening often, leads them into a habit of wish fulfilment, without any effort on their part to achieve things and face realities. Thus allowing children to live in an imaginary world, away from the real life is very detrimental to their healthy growth.

Psychiatrists give children different types of dolls to play with and encourage them to tell imaginary stories. That, however, is altogether a different thing. A teacher in a pre-school devised for normal children need not enter that province without a special study of the subject.

The teacher must to some extent, be acquainted with the facts revealed by psychology. This does not imply a deep study of psychoanalysis. But she must know the symptoms of an unhealthy mind and the probable causes of it. She must know about common childhood problems, when or how they are formed and the simple ways by which they can be resolved. Like the common diseases of childhood, they are cured by simple methods; but if neglected can develop into serious maladies. For instance, fear is common among children, almost as common as the common cold, and one need not go far to find the causes of it. Parents and other elders, including teachers, are largely responsible for creating fear in their attempts to exact obedience. Even the name of God is often dragged in by some parents to terrorize children with morbid ideas of sin committed by disobeying parents and the consequent punishment by God. This is one of the most dangerous, as well as the most common, short-cuts used to enforce discipline and good behaviour.

Inferiority or superiority feelings are common and so is the power-urge in children. Very often the cause is found in the child's home, and parents are responsible for creating them directly or indirectly through an unwholesome home atmosphere and insecurity. The teacher need not go deeper into the matter; she should just create in the child a feeling of security and affection; and give the child full scope for the activities he likes.

The four main principles initiated by Dr. Montessori create the atmosphere of the pre-school. The teacher must grasp the ideas underlying, and must know how to put them into practice, which is the most important thing. They are: 1) freedom, 2) spontaneity, 3) individual work, and 4) auto-education. All these are quite contrary to the ideas practised in ordinary schools, where the child is never free to follow his impulse and spontaneously carry out what he wishes to do. He is bound by the fetters of a syllabus which has to be completed in a stipulated time. So a timetable becomes necessary, which binds the child down by hours and minutes for certain subjects. He has to switch over to another subject as the bell peremptorily rings. Then, there is the class with which the child is required to keep pace, and his own speed is of no significance. He cannot stop more at a point, nor can he go ahead more speedily if he has grasped the subject quickly. He has to apply himself to the prescribed course whether he feels an interest in it or not. Lastly, he is taught everything, and not allowed to learn anything by his own effort through trial and error.

All these ideas that we favour, are absolutely new and the way to put them into practice is not easy. The teacher has to keep on thinking and weighing things and arriving at the proper decision on how to act every minute. Children with different trends create different situations, and the teacher has to cope with them successfully in the light of the four principles. No doubt the teacher has to be in the background and observe, without being seen, what children are doing. At the same time, she is not an inactive person. She has to be alert and on the watch for the right time to step in and make the path clear for the child. Only after long practice, will the correct reactions in a particular situation become automatic.

The teacher must know the technique of when and how to present a certain material to a particular child. There ought to be several activities provided to suit the needs of different children. She must be able to choose the proper equipment. One often comes across heaps of toys and equipment indiscriminately collected. A pre-school is considered to be very good when it is filled with rich and costly materials. This is not correct. Unwanted things mixed up with useful ones, only create confusion, and even the right material is not properly used.

The child completes his early growth of infancy by this time. He has cut most of his teeth and is able to chew solids and digest them. He has mastered, to a fair extent, the use of his limbs and learnt to control several movements of his body. He has achieved another very important art, that of speaking. He is able to express himself in his own child language, pronounced in its own way, almost forming a dialect of his own. He also understands what is said to him by adults and, to some extent, what others say to one another. He is able to understand what usually happens around him.

After this he enters a new and wider province of development. Now he has become conscious of the powers of his senses and his body, and especially his limbs. He manages with great speed and efficiency several actions and even speech. There is also a strong desire in him to know and understand the wonderful world around him. He has also shaken off his dependence on elders and learnt to do by himself several things that are daily needed. Finally, he feels a great desire to mix with other children and make friends.

The activities provided in the pre-school must satisfy all these needs felt by the child at this age. They are:

1) Provision for big movements of the whole body with special emphasis on hand and foot, such as walking, running, jumping, turning somersaults, rolling on the ground, sliding on slide board, swinging and several others, to enable the child to develop and master its muscular movements.

2) Provision for small delicate movements which require manual skill.

3) Sensory training to watch and understand the properties of things around the child by comparing, contrasting and arranging in gradation, with the help of his own experiences gained through his efforts and as a result of his own thinking and experimenting.

4) Learning language by hearing and speaking, in which the teacher and other children play a great part.

5) Learning to adjust himself to the society of children of his own age.

If suitable equipment is provided and the child is allowed to use it in the proper way to his heart's content, these activities help him to grow into a healthy child, enriched in several ways.

By experience, the following activities are found to be beneficial:

GENERAL *Safai* OR CLEANING ACTIVITY

Some children can go out with a waste-paper basket and pick up stray pieces of paper and such other litter lying here and there. Older children can even sweep the ground with long brooms, specially made to suit their heights. Some children can clean the inside of rooms.

This activity is much liked by children. It is not looked upon as a task. Little ones between two-and-a-half and three-and-a-half continue doing it for a long time. Children look upon these as movements of the hand with the broom. Dusting and other cleaning activities can also be included. Different types of brooms, brushes and dusters can be introduced. Even the polishing of shoes and brass vessels is found to be very attractive. The teacher, of course, is working with them. She must present new implements and show how to use them. It should be just a short lesson, in the presence of a group of children, and should be in the nature of a demonstration of the correct movements, without much talking.

This activity brings into play different movements of the body, chiefly of the hands. Children are delighted to see things getting clean and orderly through their own efforts. They have the satisfaction of having done a valuable piece of work.

At the same time, the child, develops a liking for cleanliness and orderliness. He gets up, cleans it with ash or a little tamarind and, looking at the bright shining pot, is proud of his own handiwork.

From the utility point of view, this activity is valuable and needs to be encouraged in our country. This love for cleanliness and orderliness is utterly lacking amongst us—a fact shown by our passively walking along dirty streets and footpaths.

The teacher has, however, to remember that this activity is not to be assigned as a task and that children should not be compelled to be at it for a fixed time. Some children may go on doing it for even half-an-hour or more while others may abandon it in a few minutes.

The general *safai* (cleaning up) must be accompanied by personal toilet. Washing of hands, feet, face, doing hair, cutting nails, and even bathing and putting on clean clothes can find a place here.

The teacher's job is to show the child how to clean itself, wash its hands, clean or cut nails and so on. She is not there just to wash them as an *ayah* would do. The main idea is to help the child to do things by himself, and by and by become self-reliant, so far as its own toilet is concerned.

With the toilet, other things like putting on and taking off one's clothes, buttoning one's coat or frock can be introduced. Folding clothes, spreading small carpets and mats are also very interesting and useful activities.

The teacher must understand the great psychological value of this activity. The child is told every now and then that he is too small to do this or that. Again, for every little thing he has to look up to his elders and be dependent on them. So, to be told that he can do a number of things is itself a healthy change, and to be able actually to do them neatly is a great achievement for him. He becomes self-reliant and can do without adult help. Through this confidence in being able to do things, his personality develops and he gains self-reliance. He knows that if he is not able to do a thing, he can soon learn and is sure that the teacher will help him to do so.

Gardening and Other Open Air Activities

To provide different activities in which children can make use of their bigger muscles and acquire control over their movements, gardening and other play material can be helpful.

Gardening is from different points of view a very healthy activity for children. In the first place, movements in the open air are good for their health. Second, digging, carrying earth and water from place to place and other movements make the child's muscles strong. Third, it brings the child nearer to Nature and the scientific 'miracles' behind the growth of life. Lastly, it affords the necessary substitute for caring and rearing small living things. So gardening should be considered one of the main activities of a pre-school.

In addition, there can be other play materials, such as sliding boards, ladders, swings, jumping pits, single bars, Roman Rings, etc. With this, there must be a good levelled playground for children to run about in.

Exercises in Practical Life

At this age, mastering different movements is the most important thing. At the same time, children are much interested in activities in the kitchen and the house. They usually like to do things that they see their elders doing at home. The kitchen in their mother's charge is the most attractive play for them for several reasons. As mother is the nearest and dearest person in their early years, they naturally want to be near her. Food, and anything associated with food is also very attractive. Different instruments and their manipulation hold their attention to a very great extent. Hence, several kitchen-activities can be introduced into pre-school as exercises in practical life. Cutting vegetables, grating, grinding, pounding and using several instruments connected with them can be very useful activities.

Material for Sensory Education

For this activity the teacher must be well-trained in the use of the sensory material devised by Dr. Montessori. Only then can children benefit by them. One often comes across Montessori apparatus in pre-schools misused or not used at all. It is only kept in show cases, which is its greatest misuse. If the teacher is not proficient in the use of the material, it is better not to buy the material at all.

Creative Arts

Even at this very tender age, children like to make something of their own. Drawing and clay modelling can be provided for the free use of the child. The pictures and the models, though most primitive to look at, are of great value as inspired creations of the child. They provide for a child a channel for self-expression.

In all these activities, the goal is not for the child to learn to do this or that work. For instance, when a small child is cutting a piece of cucumber to be served at tiffin time, it is not doing some Balwadi work, that must be done. This idea may come later on when the child is a little bigger, between four and five. At that age, he can do it as a part of the work of the little society and he can undertake it voluntarily, when he knows the responsibility he has taken upon himself and execute it properly. But the little child of three to four also wants to cut cucumber, not only because he likes to do what others are doing, but because the small muscles of his hands and fingers demand the work. He wants to learn the use of the knife, to learn all about the cutting-work and to control the movements with a will and attain muscular coordination. At the beginning, he may feel like dropping the work in less than five minutes; later on, he may like to go on for a much longer time. The teacher must remember that learning the movements is his aim, and that when it is achieved, he shows full satisfaction and may not return to it for many days. In short, there is no ulterior aim, the only object is to provide an outlet for the urge from within.

LEARNING THE LANGUAGE

This is when the child, between three and five, has a great task to perform. In fact, it is the greatest and most important of tasks that of learning the language. He has so far learnt to articulate, and has picked up the words that are most needed in everyday life. He is now keen to learn many more words and expressions. At this time, he is more interested in speaking and pronouncing, and does not care so much for meaning. Any nonsense rhymes or words interest him. The teacher can tell them stories through which they become familiar with words and expressions used by adults in varied situations. She can sing nursery songs and rhymes. Small simple songs and stories can be dramatized. Chitchatting or talking to children on various subjects of vital interest to them is one of the most interesting and educative ways to enrich their language. It encourages them to converse and express themselves well. It also induces a friendly exchange between teacher and children.

The teacher must make a special study of child literature, and try to develop a proper style and language suitable to children. Writing the same stories or lessons in simple words is not sufficient. She must acquaint herself with child literature in other Indian as well as in foreign languages, besides making a thorough study of her own regional child literature.

Folk-stories and folk-songs, suitable for children, should be selected and used to great advantage. Rhymes used in children's folk games are worth introducing even when children are too young actually to play the games.

In this study of child literature, the teacher must beware of certain unsuitable elements, that have crept into it. Adults are fond of giving sermons to children and they believe that every story meant for children must bear a moral, which must be dinned into their innocent heads. Another thing that must be discouraged in teachers is to make children repeat the story by asking them questions. There are several incidents and expressions in a story that are beyond the child's grasp. Moreover, children learn language by repeatedly hearing and slowly absorbing the language and the incidents.

That fairy tales are particularly suitable for children, is also a belief that must be discarded. That they help to develop their imagination is an exploded theory. That they must be told because children are fascinated by them does not hold much water. Facts about Nature's phenomena are no less wondrous or exciting. Nor are some of the actual experiences of human beings less thrilling. Of course, famous stories like 'The Blue Bird', are exceptions. Superstitious concepts and terrorizing elements in stories are to be scrupulously avoided.

Thus, to be a real help to children during the formative period of learning a language, is one of the very important duties of the teacher. She must prepare herself for the job with great pains.

SOCIAL TRAINING

The greatest problem man still faces is social adjustment. The duel between the selfish interests of individuals, families, towns, provinces, countries and continents, and the altruistic interests of human society, is still constantly going on. Culture has not yet become a part of man's nature, but is only a showy garment to be worn with good social manners. To be integrated into the personality, it must be worn from early childhood. At that tender age, behaviour patterns are formed which last for life. The child has a craving for other children's company; but as soon as they come together, they often fall out. They are not able to mix and play or work together. The teacher plays a very important part in cultivating a healthy social life among children.

As the teacher goes deeper into the study and gets closer to child life, she usually finds herself a changed being. Her attitude of looking at the child and his problems undergoes a great change. She also acquires an eye to appreciating children's doings. There arises a concord between the sympathetic strings of her heart and those of the children. Thus, it is only by long practice, that she perfects her preparation for a pre-school.

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CHILD WELFARE IN INDIA

Margaret Nainie

> *'The overriding reason for doing everything we can to help a child to make the most of whatever potential he has is neither political, social, nor economic. I submit that the fundamental reason is moral. In classroom, on playgrounds, in social agencies, in reform schools, wherever children are met and served, the most telling test that can be applied to every relationship and program is to ask whether each child is given the respect and acceptance due a human personality.'*
>
> —JOHN F. FISCHER

Child Welfare, an elastic phrase, countenances every aspect of a child's life that concerns his growth and proper development. The United Nations, in its Declaration of the Rights of the Child, has acclaimed the universal importance of such a recognition. It has laid down the broad objectives of human endeavour for the many-faceted development of the child (26).

In actual implementation, however, child welfare is a phrase which lends itself easily to varying interpretations. The interpretations, often equivocal, are due partly to the accumulation of concepts inherited over decades of spasmodic and *ad hoc* methods, and partly to the wide scope of potential child welfare media. Furthermore, the scope is essentially linked with the interdependent and relatively better established disciplines, such as health and education. Even in these disciplines, efforts by and large, have either not kept pace with knowledge, or, where efforts are forthcoming, knowledge has exhibited a lacuna. Hence, the tendency of varying emphasis on anything or everything pertaining to child welfare, has led to the accumulation of data indicating a veritable *potpourri* of what essentially constitutes child welfare.

CONCEPTS IN SOCIAL WELFARE

While there exists a philosophy of child welfare, a functional methodology and a gamut of approaches for ameliorating the conditions of the child in need, there is a dearth of well-subscribed theory or theories of child welfare. The importance of a conceptual frame-work, however, is absolutely essential for a field of enquiry (38). There are no doubt several concepts extant in the field of child welfare. A few are indicated here, which are significant for the understanding of the dimensions of child welfare.

The Focus

For a logical comprehension of child welfare, the comparative value of foci is to be underlined. One line of thinking is based on the concept that diagnosis and treatment of problems of children are to be dealt with at par, and indivisibly with those of the family. As has been said time and again, the importance of the family as the pivot of the child's well-being, cannot be overestimated. Robert Sears in his article 'Personality Development In The Family', emphasizes that: 'motivational characteristics are formed in the family..........................it is in the family environment that socialisation of primary drives..........and development of socially determined drives..........takes place................' (30). Sears' thesis based on the collation of several of his studies on socialisation processes, reiterates, that many child characteristics are conditioned by the rewards and frustrations of family life. Bulsara also makes a firm stand as the family being the most stable biological unit and social entity so far known to man, followed by the community and the school (4). Another equally important line of thinking, is based on the concept that child welfare deals explicitly with areas of lacuna in the child's life, which should be the focus of the collaborative effort of agencies in health, education and welfare. It does so, without specific reference to the areas of need of the other members of the family.

Both these dimensions of thought, no doubt, subscribe to the importance of the family. The differences lie in the emphasis; one emphasizes the homeostatis of the child in the family; and the other, the child as an individual in his own right, and as a joint responsibility of surrogate-family institutions.

The Approach

Arising from these foci, the method of approach assumes significance especially in an agrarian society such as ours. We are well aware that the securities of the traditional joint family are fast disintegrating, and that the nuclear family is not as yet well equipped to deal efficiently with the multiple needs of the child. The child at the same time is exposed to the concomitant stresses of a culture in transition. The family-oriented approach in its broad perspective is not incompatible with the child-oriented approach. The real danger may lie in unwittingly making the family dependent while strengthening it in the former approach, or, of supplanting the family while supplementing it in the latter approach. If, as Cormack puts it succintly, 'Security is precarious and hence the family is still the chief institution of social security' (9), we are to find a culturally toned media between inner and outer directedness of the family, in establishing a functional environment for the welfare of the child.

The Valence

Every social group is faced with the economic phenomena of inadequate resources and multifarious needs. A people might choose to invest their resources in meeting intensively some needs for all children, or extensively all needs for all children. For purposes of a label, the underlying concept may be termed the 'equality-priority value'. For instance, it might be realised that since all facets of a child's life are equally important, a carteblanche formula for the 'spread of effort' might be attempted. On the other hand, while there may be an implicit recognition of the former, proportional importance may be given to categories of needs, and an ordering of priorities may ensue. To cite an instance, the UNICEF noted in 1961, that 'most Asian countries assign the highest priority to health and nutrition; in Africa, education is urged as the most frequent problem, in parts of Latin America, it is the plight of the abandoned child' (35). Clearly, this priority is based on the perception of the greater felt need of a people. In our developing economy, the greatest problem is the relationship between insufficient income and inefficient living. Therefore, our planning has been in terms of priorities. For child welfare we have apportioned financial priorities chiefly for education; this is a recognition of a priority valence. On the other hand a brave new experiment is being launched through the Child Welfare State Demonstration Project. This type of project visualises an integrated approach to all the needs of all the children of a selected area through the coordination of various agencies. Here, investment is clearly of an extensive nature.

The Evolution

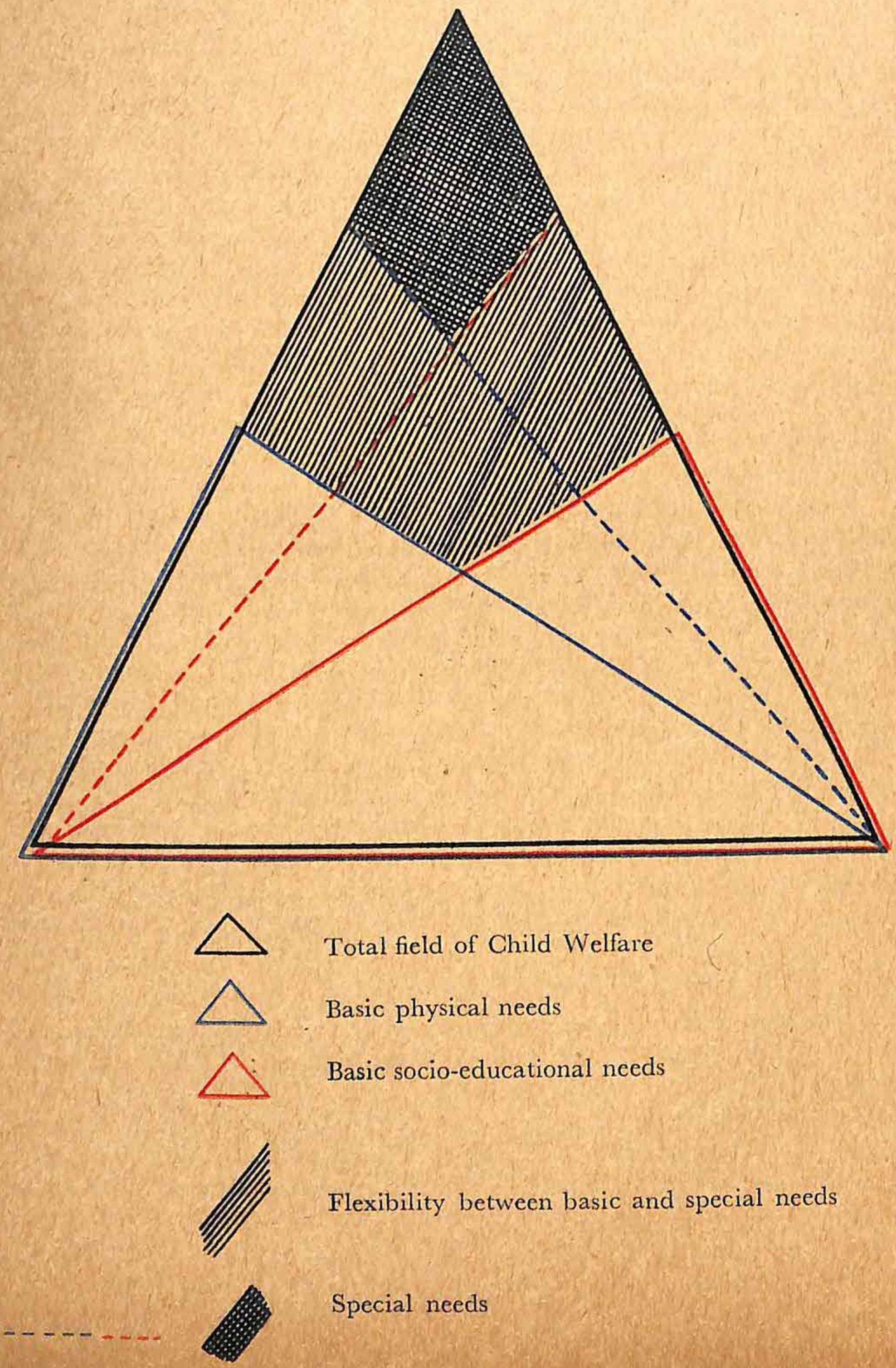
The trend of concerns and research of a country are indicative of the status of development. A glance through the available research in western culture, reveals by and large studies in psycho-socio maladjustments such as delinquency, correctional methods, emotionally neglected and mentally retarded children, and concerns about providing facilities such as foster homes, adoption, special education, etc. These countries have, comparatively speaking, passed the stage of providing basic physical necessities. We are in the throes of marshalling our meagre resources to meet the minimum needs of normal children; our calibre of studies, therefore, reveals greater concerns with collating statistics, broad-based surveys, and programme research. Assuming that the increase in technological development correlates significantly with an increase in communication and interaction, the impact of this increase upon a family involves learning and re-learning in quick succession. Frequently, the family is unable, through its own resources, to keep pace with new and required adjustments and so the child in an increasingly technological culture is more susceptible to problems of a psycho-socio nature. In our country, rural proximity to urban areas is being exposed to rapid stimuli, but for those areas farther removed, child welfare is a less complicated task. Providing facilities for the latter in health through immunization and medical checks, improved nutrition through increase in protective foods, education through providing more schools, are of a more tangible and direct nature, than providing highly skilled psychiatric and psychological services for complex psycho-socio problems. We are still at the procurement and curative stage, while technologically advanced countries are at the preventive and rehabilitative stage; we are filling in the lacunae, while the latter are, generally speaking, mounting guard to prevent such lacunae.

The Emphasis

Arising from the above consideration is the concept of the individual *vis-a-vis* the group. In the former framework, child welfare work is constituted in terms of casework with the individual child, so that an intensive ameliorative programme is undertaken with the child. Emma Lundberg in her thesis develops this approach with great sensitivity, 'for every child the kind of care he needs. ....it is the workers who must bend, not the child, it is the institution that must bend, not the child' (18). The group approach is not necessarily the antithesis of individual casework, but very often is resorted to, for *en masse* effects where individual differences are equated. A simple illustration is the playground, where it is assumed that all children will enjoy all benefits from all activities in the same measure. Very frequently the over-tired, or the withdrawn child goes unrecognized. The theory of individual differences, too well known to merit further discussion, is unwittingly overlooked. In our country it is true that the approach is more group than individual-oriented, possibly conditioned by the lack of trained personnel, and so in our implementation policies, we tend usually to think in group perspectives.

These concepts enumerated above are well embedded in the overall functional philosophy of the 'total needs of the total child.' This philosophy was first publicly enunciated in the White House Conference on 'Child in a Democracy' in 1940 nearly 23 years ago, and still continues to be so. Conceptually, child welfare correlates itself with the theories of the physical, emotional and mental health of the child. The functional approaches used in the programme of child welfare work take their cues from well developed and tested

MODEL FIELD OF CHILD WELFARE


Total field of Child Welfare
Basic physical needs
Basic socio-educational needs
Flexibility between basic and special needs
Special needs

research in health, education, recreation and personality development of the child. What then are the bases of the processes in such programmes? One may view them cognitively in the suggested model. It may be apparent from the model that recognition of child welfare is dependent upon the range of child needs. Assuming that every group, primitive or otherwise, is attuned to the well-being of its children, one may view the field of child welfare as an interlocking of interdependent triangles. The primary requisites of any child are opportunities and facilities for the satisfaction of basic emotional and physical needs, through love and security, through adequate food, shelter and clothing. These are the stabilizers of wholesome human development, as represented by the triangle formed by the intersection of the solid-lined red and blue triangles; which themselves represent the physical and socio-educational needs of the child, respectively. It is also assumed that the more complex the socio-economy of the group (in terms of goods and services), the more conscious provision will there be for formal education, recreation, socialization, ethics and aesthetics, as represented by the dotted red and blue triangles, which develop from the solid-lined triangles. Over and above this is the all encompassing field of child welfare, that not only embraces the basic and derived needs of children, but those uniquely individual needs as represented by the double criss-crossed area, which may differ not only in the field space (amount) represented, but also in the quality of relationship. This variable space stands for the child for whom essential services have been provided, but, who is still in need of special services due to his unique needs: the maternally-deprived child in need of a mother-surrogate, the mentally retarded child in need of special education, the destitute child in need of a comfortable, secure home. These special needs are in direct relationship to each of the areas of triangles, and vary as they do. Child welfare has thus to provide additional facilities such as foster homes, industrial schools, after-care homes, child guidance clinics and the like. A word of caution is merited here: this model is not static, the size of the specific areas may change according to the needs of the child by virtue of his being a unique individual.

The child's needs must be met here and now, not a week or a month or a year later. This gives an urgency to child welfare that cannot be overlooked, especially, for the 600,000,000 of the 900,000,000, who lack adequate food, shelter, clothing and protection against diseases (25). India being one such country, it is appropriate here to give a resume of the growth of child welfare in India.

PRESENT STATUS OF CHILD WELFARE IN INDIA

The development of a functional concept of child welfare in India has had its roots in individual philanthropy and denominational charity about a century and a half ago (6). However, the child, though extolled as a part of the family, has shared in the same socio-economic vicissitudes as the people. Early social history, where existent, reveals intermittent glimpses of one of the earliest known institutions—the *Madhukari* (boarding out of poor and promising children, mostly from the Brahmin class). In 1843 Dr. Buist formed a ragged school as an asylum for orphans (29), but it was mainly with the enactment of laws for the protection of children from exploitation that some recognized national effort came into existence in the latter half of the 19th century. In 1850 the Apprentices Act XIX and the Reformatory Schools Act in 1897 enabled the destitute and orphaned delinquent to earn a living, and to be given discipline and training (31). In 1920, 1922 and 1924, Madras, Bengal and Bombay enacted the Children's Act XIII respectively, in quick succession, mainly with respect to delinquency. Spurred on by this initiative, we now have some outstanding agencies like the Children's Aid Society, Bombay, the Pilot Research Centre, Hazaribagh, Bihar, as also the Ministries of Home Affairs and Education providing us with base line statistics and action research for the understanding and provision of facilities for the delinquent (28). There are various other views as to when child welfare actually began: some hold the opinion that it began almost after the First World War (3) and others relate it with the alarming rate of infant mortality (6).

In the west, the earliest public efforts were much along the same lines. In England, it began with the Elizabethan Law of 1601 for the care of children, and with the system of indenture (foster home) in 1636 (15). The movement revealed greater momentum in America with the First White House Conference in 1909, which was responsible as the forerunner for the generic Social Security Act of 1935 in America and the creation of Save the Children International Union in Geneva in 1920 (19). In India, it was the Indian Conference of Social Work, that as a premier national voluntary organization, undertook pioneer activities to stimulate interest in child welfare.

Early in the 1920's the All-India Balkan-Ji-Bari first initiated its programme through organizing recreational activities for children; it was round about then, that the early childhood education movement began with the introduction of the Kindergarten movement through the Christian missionary schools (22). With the resurgence of independence, voluntary effort regenerated fresh impetus. In 1947, the Committee for the United Nations Appeal for Children organized a 'Flower Day', for fund collection, and in 1952 it merged with Save the Children's Committee of the All-India Women's Council to form the Indian Council of Child Welfare, which is now a widely acclaimed agency for child welfare in India.

The stimulation and pioneering efforts of voluntary organizations, by and large, were not matched by corresponding governmental efforts. The Prime Minister, while speaking at a National Conference on Child Welfare as far back as the year 1956, said that '................individual acts and services performed here and there..........never solve great and stupendous problems of countrywide scale. Ultimately it is the responsibility of the government and people to solve them' (24). In the First and Second Five-Year Plans, recognition in principle was implied; it was only in the Third Plan period that practical implementation was admitted. The Planning Commission allotted Rs. 3 crores for child welfare to provide a stimulus to reinforce and motivate public consensus for the alleviation of child distress (21). The allocation through the Education Ministry was made in the following ways: Rs. 16.625 millions for Integrated Child Welfare projects; Rs. 12.5 millions for pre-school education schemes including Bal Sevika training; Rs. 500,000 for research in child growth and Rs. 375,000 for the administration of state branches of the Indian Council for Child Welfare. The sub-group on Child Welfare of the Working Group on Social Welfare has said: 'The ultimate objective of Child welfare, as distinct from other aspects of social welfare is the preparation of the human material of the country...... Whatever the absence of necessary finances may be in an under-developed economy, it is all the more essential to recognize that the preparation of the child for its responsible adulthood is the ultimate aim of an economic plan and if properly called out, is sound economy'.

Following this directive, the Central Social Welfare Board has strengthened the Balwadi programme through the extension welfare projects; and for the last three years has instituted the *Holiday Home* programme for underprivileged children. It has also undertaken a *National Survey* of pre-school education and for the first time in the history of Social Welfare, has embarked upon the preparation of an *Encyclopaedia on Social Welfare.* The Education Ministry has subsidised a much-needed premier training programme for child welfare field level workers through the *Bal Sevika Training Programme* of the Indian Council for Child Welfare. It has also provided for the establishment of the *Integrated Child Welfare Demonstration Project* for the Third Plan period. The Ministry of Health has undertaken a *Survey of the Health Needs* of school children and a widespread prophylactic programme. The Ministry of Community Development and Cooperation has provided for over 58,000 Mahila Mandals, 1,300 Balwadis, for about 3,000 primary health centres and 9,000 subcentres (33). In certain places through the collaboration of the UNICEF free milk supply schemes, expanded nutrition programmes and the midday meal programmes have been implemented. The Ministries of Education and Home Affairs have also a grant-in-aid programme for bonafide child welfare institutions, especially in the category of the handicapped and the delinquent child.

In the area of universal primary education, 80 crores have been allocated for the Third Plan period. It is estimated that 61% in the age-group 6-11 years has been covered. It is hoped that 80 % and 100 % coverage will be accomplished in 1966 and 1971 respectively (23). According to the Report of the 24th International Conference of Public Education held at Geneva in 1961, 'very few of the existing pre-primary establishments are recognized and subsidized by public authorities........research has hardly been developed; some work is being done at teacher-training institutions, at schools of social work and at psychological bureaux. Funds are not available for the development of pre-primary education........the country is now giving priority to primary education (17). Pre-primary education is still in the background for obvious reasons of funds and trained personnel.'

THE FUTURE COMPASS

With this perspective of planned public enterprise, let us stop awhile and view them against the backdrop of our children's needs. The 1961 census shows that the child population from 0 to 14 representing 38.4% of the total population will increase by an estimate of 17% in the Fifth Plan period. The following table shows India's pattern of child population growth.

CHILD POPULATION GROWTH DURING SUCCESSIVE PLAN PERIODS*

Population Total and by age groups	1st Plan 1951-56	2nd Plan 1956-61	3rd Plan 1961-66	4th Plan 1966-71	5th Plan 1971-76	Increase 1956 to 1976
			(*figures in millions*)			
Total	384	408	434	465	500	116
0 to 1	12.28	13.05	13.88	14.88	16	3.72
1 to 4	39.16	41.61	44.26	47.43	51	11.84
5 to 14	95.61	101.59	108.06	115.78	124.50	28.90
Cumulative Total	147.05	156.25	166.20	178.09	191.50	44.46

These are sobering statistics; a phenomenon which the country is inevitably faced with *vis-a-vis* a marginal economy, taking into consideration that:

1. the *per capita* income is Rs. 225 per head,

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* Working Group of Social Welfare. *Summary Report of the Sub-group on Child Welfare*, 1959.

2. nearly 50% women attending hospital and antenatal clinics, and under supervision of maternity and child welfare centres, show signs of malnutrition or sub-nutrition,
3. the birth-rate statistics are not very reliable,
4. child mortality is as high as 45% of the total deaths; the mortality of the age group 1-4 is 18.6% and the age group 5-10 is 47% of the total mortality. Deaths are due mostly to premature birth, infantile debility, respiratory and other communicable diseases,
5. there were only 61,727 pre-schools in 1961; 34 out of 100 in primary schools in 1961; and 28 million out of 39.2 million adolescents belong to the non-school going group as of 1959; there are 7,16,685 primary, 4,73,614 secondary, 20,388 technical and vocational and 27,005 special education institutions. Estimated enrolment in age group 11-14 is 3 million more in the Third Plan. Percentage should be 28 by 1966 (International Year Book of Education 1961, Vol. XXIII, International Bureau of Education, UNESCO),
6. the only food in which there is a surplus in the Indian diet is in cereals (from 1957 statistics); nearly 2% between one and three suffer from malnutrition.

From nutrition surveys carried on by the Indian Council of Medical Research, Delhi, from time to time the following observations may be drawn: malnutrition is widespread, manifested in dry rough skin, lack of subcutaneous tissue and retardation in growth, lack of vitamin B Complex more predominant in rice-eating groups, the supplementary diet of infants from six months onwards mostly being starchy foods; problems of malnutrition are aggravated by regional-cum-cultural differences, such as protein deficiency in the south, and endemic iron deficiency in the north; lack of environmental and personal hygiene increases the difficulties of nutrition education.

If we gauge the present child population as representing 40% of the total population, with 10 to 15 per cent in the most vulnerable age group of 0-6 years, it is at once apparent that the measures are woefully inadequate, *vis-a-vis* the immensity and intensity of needs. Child health and nutrition programmes have just begun to touch the fringes of the problems of adequate calorie intake, let alone balanced diets or special diets for pregnant and lactating mothers, infants and the aged. Minimum educational facilities have still a long way to go even to reach the total school-going population, let alone vocational or special education. As regards recreation, all a child needs are space, natural surroundings and supervision of a care-taking nature with little capital investment. It is perhaps for these reasons that there are more recreational institutions in the private sector. However, voluntary agencies are also beginning to undertake educational programmes, such as the Bal Sevika Programme by the Indian Council for Child Welfare, and short-term training by the Balkan-ji-Bari and other Balwadi training programmes. With the establishment of government family-planning clinics and primary health centres, voluntary effort is being revitalized in the direction of encouraging immunization programmes and advocation of smaller families.

In our welfare work, we are to establish a status; we frequently have a tendency to initiate a programme with an inauguration speech and a press conference and after that it settles as if there was no sand turned over. The task of interpretation to the public depends greatly upon the management of the business end of welfare; if the public sees that it is well-managed, it will be better prepared to equip social service administration by a staff specially trained for field work.

RESEARCH INDICATORS

India is moving in the direction of improved technology. Technology, by and large, brings in its wake phenomena related to crowded urbanization and its contingent social problems. In order to minimize the spread of these problems, it is logical first to understand the targets of our social system; one such basic target is the realization of the concept of Panchayati Raj. We ought to know, therefore, in what ways the village youth of our nation can be motivated towards the democratic values of village self-rule and the environment that should be created for their fruition values. While there is no essential dichotomy between technology and urbanization, on the one hand, and village self-rule with its commitments of youth planning, cooperation and youth welfare on the other, we ought to examine the nature and effects of such relationships, with respect to minimizing the loss of democratic values.

A prolific amount of literature on delinquency is available from western cultures, especially the United States. Much work has been done on the evaluation of juvenile delinquency and methods of its control (34). By and large, it has been found, that working with the delinquent's family and community during after-care programmes helps the delinquent maintain his improved standard of behaviour. As Octavia Lundberg puts it, 'the cornerstone of the juvenile courts is the theory that the individual child and his needs should be considered, rather than the offence and its legal penalty' (18). For a country experiencing the growing pains of delinquency, we should be prone to examine the approach and the reorientation of delinquents to normal family and community life. Richard Cloward and his associates have put forward a theory of the trichotomy of gang formation as the criminal gang, the retreatist gang, and the conflict gang (8). We may want to know in the context of our own culture, the adaptive routes of these types of behaviour in relation to social system, in order to select appropriate curative methods. There have been several pioneering institutions in our country which have attempted to examine this problem, both in its preventive and its curative aspects. The Children's Aid Society and the Pilot Centre for the education of juvenile delinquents, Hazaribagh, Bihar, have enlightened the community on the different aspects of this problem (27). Several other institutions like the Bal Bhavans, the Balkan-ji-Bari and the Indian Council for Child Welfare have attempted to implement organized recreational activities to combat the evils of urban living, but these institutions are constantly faced with the paucity of funds and the lack of trained personnel which are essential for the realization of their objectives.

The child-rearing patterns in most countries are uniquely different syndromes, due to varying socio-cultural influences. We are familiar with the terminology of authoritarian, democratic and *laissez-faire* ideologies. As yet, however, specialists are not able to match empirical data with the indices of such ideologies; what is available is a hybrid of two or more ideologies. It would be a moot question to ask ourselves in our changing social structure of increasing nuclear families and female employment, about the balance that could be feasible between permissive and restrictive child-rearing patterns. Informal studies of authoritarian patterns as in Russia, as contrasted with democratic patterns such as evolved in the U.S., pose the problem: 'What is the price of good behaviour, does it disintegrate under adolescent stress.......is it a superfluous or a deep-rooted aspect of personality? (2) Or, again, as in the child-rearing patterns in the Kibbutz of Israel (32), where 'comprehensive collective living, communal ownership and cooperative enterprise are practised objectives through communal child-rearing patterns towards a model personality, the 'sabra' (one born and raised in a Kibbutz); where the peer group functions as the reward and punishment agency.... where nurses and teachers are the child's most important socialisers.... it is nevertheless the parents who have the most important influence on the child's emotional adjustment and the 'sabra' is not an institutional child.' Such observations on cultural patterns may contain some important elements of institutional-cum-parental care of children for our society. Our child-rearing patterns with its ramification of ethnicity, religion and other variables need some careful exploring in the welfare structure we are advocating.

While Havighurst's delineation of developmental tasks is a well-known exposition, we might look at it in terms of our context. It is said that these tasks 'are created by inner and outer forces of the individual's maturing physical and mental capacities, his personal values and aspirations and the cultural forces around him' (30). Since child welfare work is concerned with children of all age ranges, a baseline survey of developmental tasks in relation to our own cultural expectations would be a fruitful benchmark for action programmes, especially, those concerned with Balwadi programmes, village youth clubs and the like.

Another area of fruitful investigation would be in programme planning for parent education. We very often fail to see the parent for the child. In the flux of change, parents are the fundamental acceptors of improved practices, whether it is improved diet, sanitary practices or sending children to schools. Parents are also susceptible to the influences of change, from the joint to the nuclear family, from primitive to mechanized forms of farming, from simple to complex interactions, especially, in the setting of various village organization such as the panchayats, the Mahila Mandals, cooperatives. Lois Murphy observes that: 'Mental health is mental health in a given setting, physiological levels of conditioning by feeding and toilet training experiences are by far.....of pristine importance.... building up of warm relationships follow....increasing the individual's capacity to overcome stress....' (20). It is parents, to a large extent, who in their child-rearing patterns, are stabilizers of the mental health of their children.

In respect of institutions for child welfare, a whole gamut of problems present themselves. In the past pages, we have stressed the significance of voluntary organizations; very often these organizations are the creations of philanthropic boards comprizing social workers with conscientious motives, who more often than not, have a sketchy technical knowledge. Within such organizations vertical lines of relationships between administration and the actual child welfare worker are ambiguous, so that often dual lines of action ensue with little effectiveness. In the implementation of the programmes, basic surveys, and probably manuals of suggested forms of administrative action for voluntary bodies may be useful in streamlining programme planning and execution. On the other hand, governmental agencies are often so inflexibly imbedded in frameworks of statute-governing principles that interpretation of policies is often strangled in red-tapism. It has been the unfortunate experience of many programmes, that measures for children are sanctioned when the opportune time for needed action is over, or that the measures may be so modified by processing, that the objective gets lost in the shuffle.

Another area of research interest is the horizontal relationships between 'coordinating agencies' so labelled. In principle, the theory is commendable, but in practice, the programme is left a-begging because of frequent encroachment lines, real or imaginary. A basis of mutual trust is a pre-requisite to attaining self-identity and achieving self-identity is a pre-requisite to harmonious collaboration; perhaps each collaborating agency is loath to leave the securiy of its self-identity. Many child welfare agencies are no doubt aware of these pitfalls in collaboration. In many respects policies have been, and are being worked out of dovetailing programmes. Nevertheless, techniques of such dovetailing are of a 'trial and error nature'. It is, therefore, a moot area for re-phrasing of such dovetailing. The principle of child welfare effort in our country is one of central stimulation, state continuation and local implementation. These relationships need to be more clearly examined, and perhaps looked at from the perspective of the local level and not the central. Take for instance the programme of pre-school education. While it is good and essential that we should have pre-school education, the economics of instituting it on a large-scale basis is to be examined in the light of available resources. Unless the system of pre-school education is based upon the local contributions of the local people, once governmental subsidies are withdrawn, communities may not have learnt the adaptation process for continued implementation, and the plan may fall apart after the Plan period.

Self-evaluation has always been a good tool for measuring progress. An exemplary instance is that of the Child Welfare League of America (established in 1915) which published a survey of its Functions and Programmes in 1955. It undertook to explore ways of eliminating confusion and duplication without sacrificing essentials. Its data obtained from questionnaires to all its member agencies were analysed on the basis of two major questions : what are the major values of the League's present programme? How can the League's programme be strengthened? Its major recommendations were : that its board should be more broadly represented, its staff reorganized, and its financial programmes should have long ranges. Among its future plans, the survey reiterated that its focus was to retain the child in the home, to increase community participation and to find greater inter-relationships between agencies. It would be a healthy sign for realigning our programmes occasionally as a basis of self evaluation to 'Where do we go to from now........?'

The process of adaptation from the experiences of welfare of other countries is a difficult decision-making process. 'The goals (of Social Welfare) may be similar but the new nations of Asia and the Middle East are faced with concurrent populational, economic, and social problems as their social systems become transferred from semifeudal, agrarian to the rudimentary industrial type' (11). Our resources are not only different in amount, but also in relation to a growing population. If we look at child welfare programmes in other countries, the apparent distance between needs and resources is not as great as is in ours. In Japan, though child welfare began in 1900 as charitable Buddhist engendered works, the war devastated whatever was in existence. But a quick recovery was made through the agencies of child welfare founded in 1947 and the Children's Charter in 1951 (37). Norway has introduced a systematic analysis of its problems in relation to the needs of children, and since the spheres of health and education are well taken care of, welfare in terms of prevention and rehabilitation is given prominence. Finland pays special attention to the care and education of exceptional children in providing for the palsied, reading and writing and speech defectives, epileptic, accoustically and orthopaedically handicapped, and for the mentally abnormal and emotionally disturbed, delinquent child (5). On the other hand, a country like China, through its first five-year plan reports in 1958, that 'Where previously medical facilites were not existent there are now 2,000 county-clinics and hospitals, 50,000 township clinics and 10,000 health centres. In 1946 it was reported that there are only 24,000 primary schools as against 5,30,000 in 1958; and that the parent education movement has been revitalised through the nation-wide 'Wu Hao Campaign' (7). This shows that a large population has a larger field of endeavour. In India 'it is not the rate of increase that causes disquiet, it is the large base on which this rate operates. Every one in six is an Indian; 1% increase mean 4.5 millions, which is more than the entire population of a number of countries. By 1976 there is an anticipated *addition* of 187 millions' (1). Dr. Agarwala who collected the results of attitude studies towards family planning, says that 'in general four children in rural and three children in urban areas are ideal size families, that knowledge and willingness to learn family planning method is a significant correlate with education, age, number of children, but not with caste and religion'. As Dr. V.K.R.V. Rao has pointed out (10, Foreword), 'without such beginning studies it is not possible to formulate an effective policy towards direction of individual motivation'. As indicated by the Planning Commission in the *Third Five-Year Plan: A Draft Outline*, 'The main task is to find effective solutions to certain basic problems and mobilize all available agencies' (14). There seems to be, therefore, much-needed action research in motivation and communication, if we are to work towards minimising the Malthusian theory of population.

By far, one of the most significant lacunae running right through our discussion is that of trained personnel. Confusion as to what child welfare work really involves has been created by the adaptation agencies make in administering professional service without adequate personnel (36).

In India, child welfare as a professional field has not acquired a status. There is not one agency, institute or university, which grants a degree in child welfare; it is usually tagged on as a part of social welfare with family and labour welfare. The usual focus of child welfare taught in these agencies is on remedial measures, usually of the handicapped, the destitute and the delinquent. Assessment of child welfare personnel needs in America, for instance, shows that in public child welfare at least 12,000 additional staff will be required by 1970; and this is a country where child welfare services are comparatively well-developed.

Our great handicap in caring for our children is this lack of skilled guidance. As more and more children appear within the orbit of our work, we are constantly faced, as Mulock Houwer once put it, with the fact that 'training programmes for personnel are almost non-existent' (16). To combat this problem, in some measure, we might attempt some subsidiary methods. One, for instance, is on-the-spot training, as in the parent cooperative nursery school movement in the States. This attempt might be initiated in our rural Balwadis as a spur to the organization of more urgently needed Balwadis.

Thus, the areas of research in our country are vast; our greatest felt needs in relation to our clarified objectives will be the best indicators of our research probabilities and possibilities. As far back as 400 B.C., Socrates gave the world of parents a compass for all time to come, when he said: "Could I climb to the highest place in Athens, I would lift up my voice and shout, 'Fellow-citizens, why do ye turn and scrape every stone to gather wealth, and take so little care of your children to whom one day you must relinquish it all'."

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